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AUTHOR Willingham, Warren W.; And Others
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ABSTRACT

This final report of the Cooperative Assessment of Experiential Learning (CAEL) project provides an overview of the major activities of CAEL's first three years. It includes a brief history of CAEL, a description of the developmental work, and selected important outcomes of the field research. The Operational Models Project (which involves the implementation of CAEL assessment programs within the educational institution) and the Faculty Development Program (which trains college faculty in the new assessment techniques) are described. The final chapter summarizes the project's accomplishments and presents major conclusions and implications. Lists of CAEL publications and products, committee members, and participating institutions are appended. (Author/NV)

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ASSESSING EXPERIENTIAL LEARNING- A SUMMARY REPORT OF THE CAEL PROJECT

WARREN W. WILLINGHAM

JOHN R. VALLEY

MORRIS T. KEETON

COOPERATIVE ASSESSMENT OF EXPERIENTIAL LEARNING

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CAEL is an educational association of 250 institutions of higher education and other educational organizations. It was chartered by the Regents of the State of New York in September, 1976 for the purpose of fostering experiential learning and the valid and reliable assessment of its outcomes.

CAEL (Cooperative Assessment of Experiential Learning) started in March, 1974 as a research and development project involving Educational Testing Service and a group of colleges and universities. Funding was provided initially by the Carnegie Corporation of New York and subsequently by the Ford Foundation, the Lilly Endowment, and the Fund for the Improvement of Postsecondary Education.

Through June 30, 1977 inquiries concerning activities, publications, or membership should be addressed to CAEL, Educational Testing Service, Princeton, NJ 08540.

Following June 30, 1977 all correspondence should be addressed to CAEL, American City Building, Suite 403, Columbia, MD 21044.

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**ASSESSING EXPERIENTIAL
LEARNING—
A Summary Report of the
CAEL Project**

**Warren W. Willingham
Educational Testing Service**

**John R. Valley
Educational Testing Service**

**Morris T. Keeton
Antioch College**

Cooperative Assessment of Experiential Learning

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PREFACE

Over the past three years the CAEL project has engaged many individuals and institutions in a number of activities—especially activities involving research, development, and training. Its goal has been to improve the assessment of experiential learning, and this report provides an overview of how and to what extent the project has met its goals.

CAEL's work has not only generated products, developed assessment techniques, and broadened understanding of many specific problems, it has also expanded our appreciation of the role of experiential learning in American education and pointed to the important challenges for subsequent work on the development of effective educational programs and sound assessment practices. Major implications discussed in this report include the following:

- the need for fostering wider use of experiential learning,
- the concomitant need for both more sophistication in assessment and more widespread dissemination of good practice that is already mastered in some places,
- the need for further work on the rationale for experiential learning and for work on criterion standards for different types of learning outcomes,
- the need to infuse higher education generally with the resources for quality assessment and quality assurance that are made feasible by work such as that of CAEL, and
- the importance of preventing with affirmative efforts the potential abuses that arise with the broadening of access to postsecondary education and with the more widespread use of, and recognition of, learning through off-campus experiences.

The outcomes of the CAEL project and the accumulated expertise of its many participants will be directly useful in dealing with these continuing challenges. Recognizing the need to maintain the momentum created through this work, the CAEL Steering Committee took the significant step of having CAEL chartered as an independent, nonprofit educational association. This continuing association has been referred to informally as CAEL II, to distinguish it from CAEL I, the original project.

Three crucial directions will probably be taken in the next decade of American higher education: toward cost efficiency, higher quality, and greater access. These trends can be mutually self-defeating if not capably pursued. CAEL I has generated important technical capabilities for doing so. This work is a responsibility shared throughout higher education, and CAEL II can have but a modest part in the endeavor. It has, however, already taken steps to assure the continuance of the fruitful coalition of over 250 institutions of higher education. It has also laid plans to continue its professional development program with external support. Its Board of Trustees is in the process of identifying priorities for its choice of projects among those indicated above and of mustering the financial resources necessary for CAEL to continue to make a significant contribution to the fulfillment of these priorities.

Warren W. Willingham, CAEL Project Director, assembled this report and wrote all sections except Chapter II, which was prepared by John R. Valley, Director of CAEL Assembly Activities, and Chapter VI, which was prepared by Morris T. Keeton, Chairperson of the CAEL Steering Committee. In order to make available a comprehensive overview of all CAEL activities, this volume incorporates several summaries of specific activities prepared by the authors for use in other project documents not generally available. Also, some sections here include reviews or condensations of material from other reports (especially *The CAEL Validation Report*) to which a number of staff have contributed. The authors express appreciation for those contributions.

The work of CAEL is due to the talent and commitment of many individuals throughout the country. No routine listing of acknowledgments could possibly do justice to that joint effort and none is included here. In a sense this entire volume amounts to a detailed listing of the work accomplished and the individuals who deserve the credit for an exemplary collaborative undertaking. In this final report of the CAEL project, the authors do wish, however, to express appreciation on behalf of Educational Testing Service and the CAEL Steering Committee for the generous support of the Carnegie Corporation, the Ford Foundation, the Fund for the Improvement of Postsecondary Education, and the Lilly Endowment.

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I. Introduction

This report describes a highly significant undertaking—an extended cooperative effort to develop substantially improved methods of assessing experiential learning. Judging from the early comments of numerous observers across the country, the task was widely assumed to be very important and highly interesting but perhaps not really possible in any systematic way. Those who participated did so because they shared the former assumptions but not the latter.

The undertaking was CAEL, Cooperative Assessment of Experiential Learning. At this writing CAEL is in a state of transition, and that transition is, in itself, a noteworthy sign of success. In its initial three years CAEL was a cooperative research and development activity administered by Educational Testing Service with policy direction by a Steering Committee composed of representatives from 10 Task Force institutions and several members-at-large. As that project period comes to a close in the spring of 1977, CAEL moves on to a new life as a chartered, nonprofit educational association. This volume gives a summary account of those first three years; it tells where CAEL has been, what has been accomplished, and who was involved.

Since CAEL is a complex activity, this introduction provides a brief orientation to the six major CAEL activities and how they were related. The following chapters provide detail and interpretation of those activities.

State of the Art Reviews

At the outset CAEL recognized the need to collect and summarize what was then known about the assessment of experiential learning. The need was partly to make current knowledge readily available to practitioners and partly to provide a framework and baseline for considering work priorities. Accordingly, an extensive survey of programs, practices, and literature was undertaken. The survey was based upon several hundred interviews and several hundred questionnaires, plus the analysis of a great many published and unpublished reports.

This inventory helped to reveal problems of major concern; the results fed into deliberations of the Steering Committee concerning project policy and direction. The findings of those state of the art surveys were also published in three important resource documents within the first six months of the project: a description of current practices (3),* a loose-leaf resource book annotating important programs and useful sources of information (2), and a compendium of assessment techniques (13). In time the first two of these necessarily became dated because of rapid changes in this field of interest, but the last remains a useful reference.

The inventory extended to basic ideas as well. In its early meetings the CAEL Steering Committee discussed a variety of educational, social, and philosophical issues concerning experiential learning and its assessment. These issues con-

*Reference numbers in parentheses refer to CAEL publications annotated in Appendix A. Examination of Appendix A is especially recommended because it describes and indexes all CAEL reports and therefore provides a useful view of the project.

cerned the basic rationale of experiential learning, how it affects the institution, the conception of the B.A. degree, and the student's education, as well as the theoretical and practical problems of assessment. The committee saw such issues as an extremely important part of the inventory that was necessary. Accordingly, the project initiated a set of commissioned papers to address such issues in detail. This part of the inventory was longer in the making but the collected series, edited by Morris Keeton (22), is the most thorough statement concerning experiential learning in recent years. It constituted a basic foundation for CAEL's work.

Developmental Work

Since developing improved methods of assessment was CAEL's main objective, the careful definition and successful execution of developmental projects was critical. At the outset CAEL had to wrestle with some extraordinarily difficult questions of policy and conception. Successful resolution of those issues resulted in identifying four priority areas and a developmental strategy for carrying out the work.

Basic to the strategy was the idea of undertaking a number of developmental projects that would produce in the first year a variety of materials (working papers) to be used experimentally by members of the CAEL Assembly. Following this tryout by faculty and students in many institutions, the materials were published in revised form. Chapter III describes those critical issues that CAEL had to face, summarizes the work that was accomplished, and describes the extensive tryout of assessment products and their final revision.

Validation Research

Part of the validation of CAEL materials was their experimental use and critique by many institutions. Another necessary step was to carry out field research that would help to evaluate and improve the technical and educational quality of different assessment methods and to reveal important characteristics of assessment procedures that tend to enhance or detract from the reliability, validity, and usefulness of local applications.

Thus, CAEL carried out a series of 10 empirical studies involving more than a thousand faculty and students in 24 institutions. This research examined assessment practices as well as assumptions behind those practices. Some of the results were reassuring, some give good cause for concern to traditional as well as nontraditional educators. Extensive findings are reported in a major CAEL project report (45); some important highlights are summarized in Chapter IV.

Operational Models

The CAEL Steering Committee recognized that developing improved methods of assessment is not enough; there are many problems of implementation. Assessment does not exist as an isolated process, but is embedded in a context of existing academic policies, procedures, and people. Consequently, a major CAEL undertaking was to develop a series of "operational models"—i.e., models of how the assessment process might best operate in various educational contexts.

The basic plan was to select 12 institutions facing rather different implementation problems and provide a cooperative working context for each to devote special attention to their particular concerns throughout one academic year. Some focused on cost-effectiveness, a critical administrative problem; others focused on criterion standards, a critical educational problem. The outcome was a series of diverse operational models and a variety of dissemination activities, all of which are summarized in Chapter V.

Faculty Development

As a further aspect of the need for effective utilization of CAEL work, the Steering Committee recognized that the state of the art in assessment of experiential learning was uneven at best. Critical to meeting the need for more effective experiential learning and better assessment of its outcomes are the outlook, understanding, skills, and effectiveness of the faculty who conduct the learning or supervise the assessors and sanction the awarding of credentials. Even in institutions that already have some years of experience in experiential learning, there was much evidence of interest in faculty training in CAEL's area of expertise.

The CAEL Faculty Development Program was designed to help meet that need. The program placed heavy emphasis upon the "multiplier effect"; i.e., training faculty and staff who would then be equipped to train others in turn. In its first year the program developed materials and trained teams from 12 institutions. In the second year those teams trained some 150 new teams. Chapter VI describes the substance of that program and the success of the effort.

Associational Activities

From the beginning CAEL was part project and part community of interest. The original conception of the project included a small Assembly of member institutions. The idea of the Assembly arose for two reasons. First, it was necessary to have a group of affiliated institutions in order to carry out the extensive validation and tryout of materials produced by representatives of the Task Force institutions and ETS. Second, there was a high degree of interest in forum activities that would facilitate the sharing of information and the discussion of problems of mutual interest concerning experiential learning. So the original CAEL proposal placed special emphasis upon Assembly meetings, publications, and clearinghouse activities.

Those involved never imagined, however, that within two and a half years the Assembly would include more than 250 member institutions and that CAEL would rapidly become a major national focus for educational reform. Within less than one year that development and its significance was apparent to the CAEL Steering Committee, and a deliberate plan was laid for expanding participation in the work of CAEL, democratizing its governance, and providing for an independently chartered continuing association. Chapter II describes the life and growth of CAEL as an association; in the end that story may be more significant than the considerable accomplishment already realized. If so, CAEL will have succeeded far beyond its intentions.

II. CAEL—A Short History

Two streams began to converge in 1973 to create the conditions that led to the establishment of the research and development project that was to be known as CAEL. In the first instance the Commission on Non-Traditional Study, under the leadership of Samuel B. Gould, had completed its work and issued its formal report. Among the recommendations of the Commission was that, "New devices and techniques should be perfected to measure the outcomes of many types of non-traditional study and to assess the educative effect of work experience and community service."⁴

In the second instance a variety of nontraditional programs had already been established by the early 1970s. Those administering and operating the programs were beginning to confront some of the harsh realities of these new ventures. In the area of assessing the educational outcomes of these programs and in assessing the educational achievement that mature adult students were bringing to these programs, institutions had a general feeling of insufficiency and a strong need for help.

In 1973 the officers of the College Entrance Examination Board and Educational Testing Service met with representatives of the Carnegie Corporation of New York to discuss how the work of the Commission on Non-Traditional Study might be followed up most usefully and profitably. That these three parties should assemble to discuss this matter was most natural. CEEB and ETS had been the sponsors of the Commission. The Carnegie Corporation had underwritten the major share of the expense of the Commission's work.

At the time of this meeting the Carnegie Corporation had been the recipient of a substantial number of proposals individually submitted by colleges and universities requesting assistance with the new problem of assessing experiential learning. Given the Commission's identification of the problem of more flexible and varied assessment techniques as a major concern, coupled with a plethora of institutional requests for aid, it was a sound strategy on Carnegie's part to seek some basis whereby the problem might be pursued in other than a piecemeal and fragmented way. Did the institutions encouraging experiential education see that they were confronting problems that were not wholly unique to individual campuses? Were the colleges and universities already approaching the assessment of experiential education in ways that their growing competence could be shared among institutions? Was there a nucleus of institutions sufficiently experienced in what they were doing that they were ready to share their knowledge with others? Could the research and measurement expertise of ETS be usefully joined with the educational expertise of these institutions?

Out of this meeting came the decision to convene a small and diverse group of institutions, educational associations and agencies, and state higher education systems to informally share perceptions of the current state of assessment of experiential learning and to test out readiness for further cooperative action. On September 27, 1973 representatives of 22 institutions, agencies, and systems met

⁴Commission on Non-Traditional Study, *Diversity by Design*, San Francisco: Jossey-Bass, 1973, p. 125.

at ETS—in all, 26 people came to the meeting and some met with one another for the first time. At the early stages the discussion was hesitant. Some institutional representatives waited expectantly for the "ETS plan" to solve their problems. Soon the view emerged that, indeed, they had been brought together to explore the concept of cooperative efforts in the area of assessing the learning outcomes of nontraditional education. As each institution described where it stood in terms both of problems and concerns and limited success in tackling the area, any worry that they would be seen as inexperienced amateurs was set aside. The meeting reached two conclusions: some sort of consortium or cooperative effort seemed viable, and ETS was encouraged to proceed.

In November 1973, ETS convened a meeting of nine institutions (later identified as Task Force institutions) to discuss a specific research and development proposal. ETS indicated its readiness to work intensively with these institutions to develop and refine techniques, processes, and procedures for the assessment of experiential learning. Incorporating many suggestions of the institutions and accompanied by the written endorsements of the Task Force institutions, a formal proposal was made in December 1973 to the Carnegie Corporation of New York for "CAEL—Cooperative Assessment of Experiential Learning."

In March 1974, Carnegie replied by making a grant of \$821,000 for the first 16 months of the proposed project. The proposal, however, was for a three-year effort at a substantially greater sum. ETS and the Task Force institutions decided to launch the project and to deal later with finding the resources to complete the package of tasks addressed in their proposal. (As noted in subsequent chapters of this report, substantial additional funds were later obtained from Carnegie, the Ford Foundation, the Fund for the Improvement of Postsecondary Education, and the Lilly Endowment.)

The Leadership and Administration of CAEL

With the problem of financing temporarily set aside, the next issue was how to execute and administer the project, how to provide input from the Task Force institutions, and how to relate the work of the project to the interests of the higher educational community at large. Warren Willingham, Executive Director for Program Research at ETS, who had written the proposal to Carnegie was designated project director. General policy direction for the project was established in the CAEL Steering Committee—a group of 15 persons including one representative from each of the Task Force institutions* (New College, University of Alabama; Thomas A. Edison College; Empire State College; Framingham State College, Massachusetts State College System; Antioch College; Florida International University; The California State University and Colleges; Minnesota Metropolitan State College [now Metropolitan State University]; and El Paso Community College), one representative from ETS, and five "at-large" representatives (from University of Chicago; Washington University; Community College of Vermont; National Association of State Land Grant Colleges and Universities, and Brown University). With the first meeting of the Steering Committee in March 1974, CAEL

*The Community College of Vermont was added as the 10th Task Force institution very shortly after the project began.

was officially underway. At the founding meeting, the Steering Committee elected Morris Keeton of Antioch College, Jules Pagano of Florida International University, and Peter Smith of Community College of Vermont, chairperson, vice chairperson, and secretary, respectively.*

It is interesting to note the philosophical dedication of the Steering Committee. At its first meeting it adopted a seven-point set of propositions as basic guidelines against which activities and goals of the project would be judged. The propositions addressed concerns about assisting individual learners through assessment: to meet their needs, to foster their aspirations, and to support their responsibilities. The Steering Committee also made several administrative decisions at this meeting: the consortium, the arrangement described in the proposal that provided for institutional memberships, was to be called the CAEL Assembly; and membership dues were set at \$250 per year. A Working Committee, later to be known as the Implementation Committee, with membership drawn from the staffs of Task Force institutions, was established to provide technical advice and counsel regarding the work of the project (see Appendix B).

The history of CAEL is complicated by the fact that while a central research and development project was being pursued and while this research and development effort had its own permutations over time, during the first year there surfaced a concern about the future of CAEL beyond the funded project. There was a developing resolve to explore thoroughly some more permanent mechanism to carry on and extend the work of CAEL.

Consequently, the records of the CAEL Steering Committee and the Executive Committee reveal two major agendas. One is the research and development work and the balance of this summary report focuses on that aspect of CAEL. The second agenda is concerned with the Assembly and what emerges eventually as a decision to establish a new postsecondary educational association. The balance of this chapter traces the history of that development.

The CAEL Assembly

The original proposal to Carnegie indicated that a national consortium would be organized to provide a forum for discussion, to communicate with colleges about the products of the project, and to provide a mechanism for identifying a cadre of institutions where special projects and intensive research and development work could go forward under the auspices of CAEL. The proposal expressed the hope that 50 or more institutions might be found sufficiently interested in joining CAEL as dues-paying members. As one of its early actions the Steering Committee set membership dues at \$250 per year. Dues of this magnitude obviously related to project income, but the Steering Committee was equally concerned with some assurance that membership also meant serious commitment and institutional involvement. By setting membership dues at that level, it hoped to obtain such assurances. The Steering Committee decided to call the consortium The CAEL Assembly.

Initially membership in the Assembly was open to degree-granting institutions and agencies. Associate membership was available to other organizations in-

*The names of the Steering Committee members appear on the inside front cover of this report.

volved and concerned with experiential learning programs. In the late spring of 1974 membership invitations were sent to all undergraduate institutions of higher education and to associations and agencies known to be supportive of experiential learning activities. By the end of July 1974, 125 applications were in hand, and together with the 15 Steering Committee institutions, CAEL started its first year with 140 members.

The initial membership in the Assembly was geographically distributed as follows:

- 34 percent Great Lakes and Plains Region
- 32 percent North Atlantic Region
- 20 percent Southeast Region
- 14 percent Western and Southwest Region

By highest degree offered, the membership was distributed as follows: 19 percent offered two-year degrees as the highest degree, 10 percent offered four-year degrees, and 71 percent offered some level of graduate study. By control, 57 percent were publicly controlled institutions, and of the private institutions, 22 percent were church related.

By enrollment the distribution was:

- 33 percent less than 2000 students
- 17 percent 2000 and less than 4000 students
- 32 percent 4000 and less than 10,000 students
- 18 percent over 10,000 students

With actual members in hand and a chance to see, therefore, what kinds of organizations were seeking to affiliate with CAEL, in September 1974, the Steering Committee abolished the associate membership category, and all existing associate members were invited to full membership.

CAEL also began with the realization that meetings of the Assembly would not be small intimate conferences. The style and format of Assembly meetings would need to take into account not only the requirements of the research and development thrusts of the project but also a substantial diversity of needs and expectations as reflected in the membership.

It is interesting to observe that the Assembly seems to have fared better than the hotel in Chicago where it first met. The Westbury was a relatively new hotel of a size that could comfortably accommodate the first meeting. (Subsequently the hotel ownership changed, and it is no longer known as the Westbury.) The program for the first Assembly meeting was multipurpose: to inform members about project plans and opportunities; to permit members to offer input to these plans; to enable members to meet staff, Steering Committee members, and each other; to hear and react to formal papers designed to probe issues and philosophical concerns; and to help the membership and leadership of the project to identify problems, issues, concerns that should receive attention over time. By the time of the first meeting of the Assembly, the project had produced its first reports: *Current Practices in the Assessment of Experiential Learning* (3) and *A Compendium of Assessment Techniques* (4). Two hundred and fifteen people registered for the first meeting of the Assembly representing 144 institutions, agencies, associations, or foundations.

Following what was regarded as a very successful Assembly meeting in Chicago, the Executive Committee gave its attention to the general thrust of the spring 1975 Assembly to be held in New Orleans. It recognized the critical connection between the ongoing developmental work and the next meeting. Discussion at the second Assembly needed to be product-oriented and focused on the experimental materials produced by the developmental tasks and how these materials would be tried out at Assembly institutions. This meant, of course, that the developmental tasks had to be kept on schedule to assure that there would be something to discuss in New Orleans. Further planning for the New Orleans meeting needed to proceed in the anticipation that the developmental tasks would yield products that would merit the attention and interest of the membership.

These considerations were communicated to David Provost, who as a member of the Steering Committee was chairman of the Assembly Subcommittee. Consequently, the first meeting of the Assembly had barely ended when serious attention was being given to the next session.

The New Orleans meeting, which attracted 281 persons, provided five workshops, each lasting a half-day and each scheduled for two presentations to permit registrants to attend two workshops. The workshops focused on the experimental products that were being developed in the four priority areas of the project. In addition, there were eight seminars which dealt with the work going forward with the support of CAEL at various member institutions. In total these events provided participants with a good sense of what the project was doing and what might be expected by way of the outcomes of the developmental work. Cyril O. Houle, Professor of Education, University of Chicago, and a Steering Committee member opened the Assembly with a formal presentation entitled "The Deep Traditions of Experiential Learning." Professor Houle did a masterful job of providing the audience with a sense of where they had come from and how their interests in experiential education related more generally to the development of higher education.

The program of the New Orleans meeting was also structured with an eye to the future. In a plenary session, Morris Keeton focused the attention of the group on the future of the Assembly. Immediately following, there was a working lunch in at which small table discussions were to be centered on the future of the Assembly. Questions, concerns, and expectations were recorded. The New Orleans meeting ended with David Provost summarizing the views expressed by the conferees. The view of the group was clear. The leadership of the CAEL project was being asked to look beyond the life of the project and to give consideration to ways to maintain the momentum built up by CAEL and to provide for continuing needs of the institutions that had joined the Assembly.

The Steering Committee at its May 1975 meeting appointed a Subcommittee on Mission and Governance with George Ayers, Vice President for Academic Affairs, Metropolitan State University as chairman. The subcommittee was charged with conceptualizing the mission of CAEL beyond the work of the then funded projects and its long-term governance. The subcommittee met in June 1975. Its report was discussed by the Executive Committee in September 1975 and by the full Steering Committee in October 1975. The actions taken at that time set into motion the incorporation of a new association, a task to be accomplished in 1976.

Very early two issues emerged regarding the character of the association. The

first was the issue of individual vs. institutional membership. The second was whether the primary focus of the association should remain on assessment or whether the association should be concerned with experiential education more broadly. There were strong advocates for the view that membership in CAEL should be institutional. Yet many voices argued that institutional membership would exclude from participation those individuals with keen interests in experiential learning who happened to be located at an institution unable or not ready to become a CAEL member. The second issue was also one that had advocates on both sides who used the opportunity of the Assembly meetings to make their positions known.

Meanwhile, the third meeting of the Assembly in October 1975 took place in Philadelphia, Pennsylvania, ironically again at a hotel that no longer is in operation. (The Bellevue Stratford, which was hit a year later by the mysterious Legionnaire's Disease, was forced to close because of financial difficulties.) At the time of the Philadelphia meeting, however, the initiative to incorporate CAEL had not yet been taken. While the Subcommittee on Mission and Governance had been hard at work, its report had not received the attention of the Steering Committee by the time of the Philadelphia Assembly meeting. Consequently, this matter was not on the agenda of the October 1975 Assembly in any prominent way. There was an opportunity for those who were interested to discuss future direction for CAEL in an informal meeting, however.

The Philadelphia Assembly provided an opportunity to share with the membership and guests in five workshops the outcomes of CAEL-supported special projects that had been underway for over a year at Antioch College, University of California at Los Angeles, Wayne State University, Empire State College, and William Rainey Harper College. The workshops were preceded and interspersed by several discussions of strategies for change within the system. In general, the Philadelphia meeting reflected not only a maturing of CAEL, but some degree of self-assurance among the registrants. They were prepared to talk seriously about how to change the system to accommodate the special interests and values that they individually espoused toward experiential learning.

In the summer of 1975 the first step was taken to involve the Assembly membership in the governance of CAEL. Five Steering Committee members (Barbara Barbato, Sheila Gordon, Richard Allen, William Thomas, and John Duley) were chosen by mail ballot of the Assembly membership. These elected members sat on the Steering Committee when the report on Mission and Governance received action. Consequently, a strong Assembly membership representation was present and was heard at the time the Steering Committee decided to proceed with the incorporation of CAEL as an educational association.

May 1976 saw the Assembly in session at the Denver Hilton Hotel in Denver, Colorado, at a conference organized around the theme "Educational Priorities and the Future of Experiential Education." Attendance jumped to 352 persons. In the meanwhile membership in the Assembly continued to grow so that by the end of June 1976 it stood at 241 institutions, agencies, and associations.

The program of the Denver meeting was indeed packed with something for the tastes of any and all. Carl Rogers, K. Patricia Cross, James W. Hall, James M. Rosser, and George Bonham were featured speakers. The CAEL Assessment Reports (Handbooks and Student Guides), products of more than a year's de-

developmental work and tryout in the form of working papers, were brought up for one last review before going into production as final reports. Eighteen program topics handled in formats varying from demonstration/discussion groups to simulations and workshops were contributed by members and other guests. And among all of these activities, the group assembled had a chance to look in detail at the plans for the future of CAEL beyond the project.

From Project to Association

In March 1976, the Executive Committee of the Steering Committee, while meeting in Chicago formally applied for a charter for CAEL from the Regents of the University of the State of New York. The charter application and the proposed bylaws were duplicated and made available to each person attending the Denver meeting. These materials were accompanied by a six-page questionnaire that solicited reactions to the name and purpose of the new organization and to each of the nine articles of the bylaws. These matters were discussed in plenary session by Morris Keeton. The group then responded to the questionnaires. A summary report of the responses was made to the Assembly by the close of the meeting.

By the time of the Denver meeting, the Executive Committee had also appointed Jules Pagano and Sheila Gordon to serve on a Nominations and Elections Committee for electing members to the CAEL Board of Trustees. The Nominating Committee assembled a slate, which was reviewed by the Steering Committee in May, and the election itself was held during the summer of 1976. The following individuals were elected to the CAEL, Inc. Board of Trustees:

Neal Berte, Birmingham Southern College
Arthur Chickering, Empire State College
John Duley, Michigan State University
Nirelle Galson, Syracuse University
Lorraine Matusak, University of Evansville
Jane Permaul, University of California, Los Angeles
David Provost, California State University and Colleges
Robert Sexton, University of Kentucky
Urban Whitaker, San Francisco State University

Jean Pennington, Washington University, was also elected, immediately resigned, and was replaced by James D. Brown, Jr., Thomas A. Edison College.

The full Board of Trustees, therefore, included the above plus the six members of the Executive Committee that had served as the incorporators:

George Ayers, Metropolitan State University
Barbara Barbato, Webster College
Sheila Gordon, LaGuardia Community College
Morris Keeton, Antioch College
Jules Pagano, Florida International University
Peter Smith, Community College of Vermont

The fifth meeting of the CAEL Assembly in Cleveland, Ohio, in October 1976 was also the occasion when CAEL, Inc. began to function. The charter application, approved by the New York Regents in September 1976, provided for a nonstock

corporation organized for educational purposes prohibited from engaging in any activities that would jeopardize its exemption from federal income tax pursuant to Section 501 (c) (3) and related provisions of the Internal Revenue Code of 1954.

It is of interest to note that the charter application and the bylaws provided room to maneuver on the two issues concerning the character of the association discussed earlier in this chapter. The issue of institutional vs. individual membership and the broader issue of focus on assessment vs. experiential education had continued as concerns among Assembly members and with the Steering Committee. The Charter application uses the following language to address the purpose of the association: "...to assist institutions of higher education to increase their ability to define, assess, credit, sponsor and evaluate experiential learning and experiential learning programs, including the specific purposes of:

- a. assisting institutions of higher education increase their capacity to use and carry out experiential learning effectively;
- b. assisting institutions of higher education improve assessment practices;
- c. providing a forum for a discussion of ideas; and
- d. providing an outlet for scholarly thought."

The bylaws of CAEL provide for Regular Members (i.e., institutions) and "Other Classes of Membership" as prescribed by the Board of Trustees. At the first meeting of the Board of Trustees institutional membership was confirmed and provision was made for professional associates, student associates, and organizational associates to accommodate those individuals and organizations who shared interests and concerns with CAEL but would not qualify for membership.

Coincidentally the theme of the October 1976 Cleveland meeting of the Assembly was "Institutionalizing Experiential Learning." Against the background of that theme, the new CAEL Board of Trustees had their founding organizational meeting and elected Morris Keeton as Chairperson, Jules Pagano as Vice Chairperson, and George Ayers as Secretary-Treasurer.

In the meanwhile 317 members and guests participated in the program of the October 1976 Assembly—a program that stressed nine seminars resulting from the work of the Operational Models project and a report on the findings of CAEL's year-long validation research. And again the Assembly meeting, as was true of the previous four meetings, built bridges to the future. There was a session devoted to exploring regional programming and regional organizations for CAEL II (as distinct from CAEL I, the original project). There was another session where guests got together on the basis of institutional types to identify more specialized concerns to which they wished to devote attention in the future.

With the Charter approved, a board of trustees in place and officers elected, the stage was set to complete discussions with ETS for the final transition from CAEL, the project, to CAEL, the association.

There were questions of the transfer of physical assets in the form of inventories of materials developed and printed, the protection and transfer of rights to materials, etc. There was also an offer made by ETS and accepted by CAEL to provide \$25,000 in staff support to assist CAEL in getting established independently. Without going into detail, ETS indicated its intent to honor fully its commitments to complete the funded research and development work. ETS also agreed to grant to CAEL a royalty-free license to use CAEL materials copyrighted by ETS

prior to CAEL's incorporation, and to turn over to CAEL its inventory of CAEL publications on June 30, 1977.

This chapter has been prepared with some history yet to be written. A final CAEL Assembly meeting is scheduled for Atlanta, Georgia in May 1977. The program for that Conference is yet to be planned. However, it will be different. The spring 1977 meeting will not have a backlog of research and development work to report and share. This meeting will be much more dependent on resources and insights that must come from the membership. The membership for year 1976-77 is still growing—232 renewals paid or pending, 35 new members paid, a total membership of 267, with 10 additional new applications pending. From September 1973 to June 1977—slightly under 4 years—Cooperative Assessment of Experiential Learning has moved from an idea in which some individuals thought colleges and universities might have an interest, to a research and development project whose total impact is yet to be felt, to a new postsecondary educational association. The history of CAEL is, indeed, short, yet perhaps a history whose major significance will be found in the future.

III. Outcome of the Developmental Work*

The most important early task facing CAEL was to define the developmental work that it would undertake. Although the purpose and procedure of the project were outlined in general terms in the grant proposal funded by the Carnegie Corporation, there were many details yet to specify as the project got underway. Furthermore, this was not a well-charted area, and there were important policy issues and educational values that needed to be clarified. These were heightened by differences in orientation and experience of the Task Force institutions and ETS. The Task Force institutions were:

Antioch College
California State University and Colleges (San Francisco State University)
Community College of Vermont
El Paso Community College
Empire State College
Florida International University
Massachusetts State College System (Framingham State College)
Metropolitan State University
New College (University of Alabama)
Thomas A. Edison College

These institutions brought special experience in and commitment to highly individualized, student-centered education. ETS brought special experience in measurement theory and practice. It was a basic assumption of the project that effective work on improved methods of assessing experiential learning would require a combination of those orientations and that both parties would learn a great deal in the process. Those were good assumptions, and in the early discussions the different points of view were critical in defining what work the project should undertake in order to achieve its objectives.

DEFINING THE WORK

There were three complex issues that had an important bearing on the nature of CAEL developmental work and how it was defined. These concerned the functions of assessment, the standardization problem, and the scope of the work. These issues were discussed at length by the Steering Committee: some took longer than others to work out. The following paragraphs give the gist of those issues and how they were resolved.

The first issue concerned the functions of assessment and how those functions were related to the goals of the project. It is useful to distinguish two important functions of assessment: the certifying function and the educative function. The certifying function is concerned with formal evaluation of achievement and the soundness of credentials. This function tends to emphasize the importance of validity and reliability. The objective of the CAEL project to improve that assess-

*Appreciation is expressed to Jane Porter Stutz for assistance with parts of this chapter.

ment function was well-recognized. Thus, the need for sound new methods of assessment was associated with such familiar problems as establishing credibility of programs, minimizing abuse of flexible credit policies, and insuring public recognition of credit granted.

At the same time the Steering Committee recognized the equally important problem of improving the educative function of assessment; i.e., the value of assessment to the individual. Considering that a major goal of experiential learning is to facilitate personal development, it was clear that CAEL must work toward assessment methods that would foster individual learning and aspiration and encourage individuals to take responsibility for their own learning. CAEL acknowledged both functions of assessment to be much in need of improvement, and that emphasis is reflected in the developmental work and the validation research reported here.

A second major issue became known as the "standardization problem." Experiential learning tends to be highly individualistic and quite open-ended with respect to content of the learning. For that reason it is usually inappropriate to think of a standard assessment procedure or instrument. CAEL recognized that there were many instances where a traditional achievement test could be a convenient and efficient means for assessing knowledge in a particular subject area, but that such tests were very frequently not appropriate in assessing experiential learning. The primary purpose of the project, therefore, was to develop better methods for dealing with just such situations.

So CAEL immediately ruled out of its work any standardized procedures or conventional test instruments. The obvious question was how can one expect assessors to do their job correctly if they all do it in different ways? The project dealt with that problem by concentrating upon the assessment *process*—the important principles that need to be understood and applied, the procedural steps that are normally useful, and the prototype materials and documents that could be locally adapted to particular situations and types of learning. In addition to emphasizing alternate ways of applying sound principles of assessment, CAEL also gave special attention to training materials and faculty development activities in order to foster good practices without forcing the solution into an unworkable straitjacket.

Another aspect of the standardization problem was the fear that some might perceive assessment of experiential learning as an overly simple problem based upon a narrow view of education. There was considerable nervousness that a large effort might have the effect of imposing one educational philosophy when many abounded. This seemed particularly troublesome since widespread interest in rapid progress raised the danger of premature "routine" solutions.

From these considerations CAEL developed its general strategy of working toward long-range goals of improved assessment methods. During the first year, developmental work led to a series of preliminary working papers on different assessment problems. These working papers emphasized the principles of sound assessment and how they might be applied to different programs. The validation stage in the following year would involve two complementary efforts—a broadly based tryout of the working papers leading to their revision, and field research that would empirically test principles and practices.

A third major issue concerned the scope of the work. This was ultimately a pragmatic matter of setting work targets, but, at first, discussion revolved around

the question of how to define experiential learning. The original proposal clearly defined the scope of the project to include sponsored learning (typically off-campus programs for enrolled students) as well as nonsponsored learning (typically learning prior to matriculation), but this left much unsaid; namely, what are the nature and rationale of experiential learning?

Although the Steering Committee recognized that a great deal of time could be devoted to that question, it was not convinced that an early answer was necessary. Therefore, CAEL consciously set the question aside. It was assumed that the series of commissioned papers mentioned in Chapter I would speak usefully to the definitional issue; meanwhile, attention turned to the immediate problem of work priorities.

CAEL recognized that it could not possibly cover all areas needing developmental work; nevertheless, it was necessary to start somewhere, and CAEL selected four priority areas. Noting that there are various types of competences, alternate methods of assessment, different arenas for learning, and different parties to the assessment, CAEL chose one important instance of each as follows:

- Assessing the Achievement of Interpersonal Skills (an important *competence*)—Experiential learning frequently involves application of knowledge in situations that depend upon interpersonal skills and offer special advantages for developing such competences.
- Use of Portfolios in Assessing Nonsponsored Learning (an important *method*)—Assessment of nonsponsored learning most often begins with preparation of a portfolio that presents pertinent information and documentation, this process was of special current interest to many institutions.
- Assessing the Learning Outcomes of Work Experience (an important *arena*)—The relation of education to work has attained national significance, and the various types of "work" experience are among the most common forms of experiential learning offered for assessment.
- Use of Expert Judgment in Assessing Learning Outcomes (an important *assessor*)—Much experiential learning is highly individualized, based on unique combinations of experience, and must necessarily be assessed through some form of expert judgment rather than objective instruments.

During the academic year of 1974-75, ETS and the 10 CAEL Task Force institutions collaborated on developmental work in these four priority areas. An Implementation Committee was constituted of representatives from each of the Task Force institutions and ETS (see Appendix B). This group, plus other collaborators, worked on seven developmental tasks and produced by the end of the academic year seven working papers. These working papers formed the nucleus of CAEL work during that developmental stage. At the end of the year the CAEL Steering Committee appointed a CAEL Resource Panel, consisting of a number of institutional representatives who made important contributions to the work (see Appendix B), and recommended these individuals as consultants to other institutions.

Also during its first year, CAEL commissioned 20 special projects in order to diversify the developmental effort. These projects focused upon the four CAEL priority areas, but they were carried out independently by individual institutions. Five of the special project reports produced during 1974-75 were selected for publication as institutional reports. These institutional reports were distributed to CAEL Assembly members for experimental use along with the working papers. Together, the working papers and the institutional reports constituted the developmental products of the first year. That work is described briefly in the following section.

DEVELOPMENTAL PRODUCTS OF THE FIRST YEAR

Assessment materials developed in 1974-75 included 13 items: 5 assessment handbooks (originally 4 with 1 added later), 3 student guides, and 5 institutional reports. These were prepared by individuals from 11 CAEL institutions and ETS staff. These reports are outlined briefly by priority area; all reference numbers refer to the complete listing in Appendix A that includes all titles and authors. Note that most of these reports were revised in 1975-76. That process is described in the final section of this chapter.

Assessment of Interpersonal Skills

The working papers in this area—one for faculty and one for students—focused on societal roles that demand interpersonal competence in order to demonstrate the importance of such competence and its function in the undergraduate curriculum. The faculty handbook (6) provided a general framework for understanding interpersonal skills and their relation to degree programs. The student guide (7) translated these ideas to the student's needs and point of view and provided illustrative cases as possible examples of useful learning objectives that involve interpersonal competences.

In addition to a theoretical structure, these two working papers provided a description of strategies for developing a program and methods of assessment. The working papers explored opportunities for applying these assessment methods to learning in the interpersonal domain. Furthermore, a general model was suggested that included alternate procedures for adaptation to particular assessment situations on individual campuses. Work in this area was supplemented by two independently developed institutional reports.

An institutional report prepared at Empire State College (16) placed emphasis on the incorporation of interpersonal learning into the formal educative process. At Empire State learning is structured via a learning contract developed by the student with the help of a mentor. This paper demonstrated how the learning contract mode has been applied to interpersonal learning. The authors used a learning framework that takes account of cognition, affect, and behavior (thought, feeling, and action).

Another institutional report on assessing interpersonal skills was prepared at Wayne State University (18). It described the development of a performance checklist for use in a field-work practicum in social work. The project grew out of a recognized need for an instrument to assess student performance in the field

based on the identification of specific behaviors that reflect learning. It was intended to counteract undesirable assessment practices that frequently occur; i.e., ambiguous reports, or assessments presented largely as personality dynamics. The checklist can be readily adapted to other types of field work.

Use of the Portfolio to Assess Nonsponsored Learning

Developmental products in this priority area included two working papers (a faculty handbook and a student guide) and an institutional report. The faculty handbook (8) focused upon two important questions that need to be considered in developing procedures for the assessment of prior (or nonsponsored) learning: (1) What principal steps are used to assess prior learning? (2) What choices do faculty have concerning alternate procedures under each step?

The handbook provided information about the state of the art in portfolio assessment and described various alternate procedures in each stage of an eight-step model. Sample checklist forms, outlines, documents, and instruments from cooperating institutions were included to illustrate various procedures. Advantages and disadvantages of alternate procedures were also discussed.

The student guide (9) was coordinated with the faculty handbook, but written in an informal style and designed for use by adult students. It took into account a variety of institutional assessment procedures and arrangements. The guide described the steps in portfolio assessment and used examples of six students seeking university degrees. This document was designed not only to help the student with practical problems concerning the construction of a portfolio but also to guide the student through what can be a highly educational experience.

An institutional report (19) described how William Rainey Harper College established procedures for assessing the nonsponsored experiential learning of students applying to a new, nontraditional Associate in Liberal Studies Program. The report discussed a procedure that included a local task force, consultants, and site visits to other institutions. Eventually two documents were prepared: a set of procedures and a student guide for portfolio development. In addition, the task force organized a seminar to help students develop their portfolios.

Assessing the Learning Outcomes of Work Experience

This area included two independent lines of work: the assessment of specific work competences, which was the subject of one handbook; and the assessment of college-sponsored off-campus learning, which was the subject of a student guide, a companion handbook for faculty and supervisors, and an institutional report.

One handbook (10) presented a general model for assessing specific competences in occupational fields, especially those required in career-oriented degree programs. The model was designed to help a college specify the kinds of skills and competences acquired in various occupational settings, to define the learning outcomes of its occupational and career programs, and to translate students' relevant work experience into college credit. In seven sequential stages the model described how lists of competences can be developed in an occupational field and how they can be used for assessment of work experience. The author included a detailed application of the model to the fields of data processing, law enforcement,

and secretarial science, and showed how it could be applied to other fields as well.

Another guide (11) was intended for students participating in sponsored experiential learning programs (work-study programs, internships, cooperative programs, etc.). It was designed as a combined planning guide, study outline, and self-evaluation device to help students integrate their work experience meaningfully into an overall educational program. The student guide discussed such issues as career exploration, acceptance of responsibility, and preparation for the learning experience. More specifically, the guide outlined a series of 11 steps through which the student is encouraged to progress. These range from taking stock of goals to assessing learning outcomes after the off-campus experience and identifying new learning objectives. These steps were accompanied by appropriate worksheets and checklists.

Following the preparation of this report, it was recognized that such a student guide would be greatly strengthened by a companion handbook for faculty, staff, and field supervisors. Such a handbook was prepared and published as part of the revised series of CAEL assessment reports (52). The content of the student guide and the handbook were coordinated, but the latter placed special emphasis upon defining and developing appropriate placements, preparing students, and program evaluation. It covers all types of field experience learning, not just those normally associated with work situations.

An institutional report prepared at the University of California at Los Angeles (17) supplements this handbook and guide. The UCLA report described the use of a record-reflection log and a process-assessment matrix as tools to be used in assessing sponsored learning. Because faculty have much less direct contact with and supervision of students in experiential learning situations than in traditional classroom settings, the report explored possible roles for other persons in the evaluation process—especially the student and an independent evaluator. It also stressed formative evaluation for monitoring the progress of both the individual student and the course or program as a whole.

The Use of Expert Judgment in Assessing Learning Outcomes

As explained earlier, CAEL placed special emphasis on improving the process of assessment rather than developing standard instruments. One handbook (12) was especially important because it provided principles and guidelines for faculty, students, and consultants on the process of using expert judgment that is so often the basis for assessing experiential learning. The first portion of this report dealt with procedural issues; for example, (1) the functions of the expert assessor in addition to actually judging competence (defining criteria and adapting the assessment procedure to the student), (2) the importance of establishing assessment standards that are defined as systematically as possible and related to objective, observable indices or behaviors, (3) the issues of reliability and validity, illustrated with examples of rating errors that bear on the fairness of assessment, and (4) the evaluation of assessment.

These various issues, principles, and steps in assessment were illustrated and discussed in separate chapters covering four common uses of expert judgment: interviews, product assessment, performance assessment, and assessment of written material. Discussion of each of these four areas included a number of

practical hints and suggestions for the improvement of assessment as well as problems and pitfalls to avoid. Several applications were described in detail.

In addition, an institutional report from Antioch College (15) provided a useful summary of a number of critical issues and questions that arose in workshops designed to help inexperienced faculty become better experts in evaluating demonstrated learning of adults. The report illustrates well the learning process as faculty share their experiences, discuss ways of improving their evaluation techniques, and facilitate the development of expert judgment. Case studies, sample learning evaluation reports, and samples of actual forms were included.

TRYOUT AND REVISION OF DEVELOPMENTAL WORK

Following the developmental work of the first year, the project moved into a second important phase—the tryout and validation of experimental assessment materials in CAEL Assembly institutions. This work was funded by the Carnegie Corporation of New York and the Ford Foundation. The Steering Committee regarded the original materials as an important step forward and quite suitable for experimental use, but the Committee also believed the materials clearly required review and critique and could undoubtedly be improved in a variety of ways.

So an important outcome of the validation process was to be the revision, improvement, and formal publication of materials based upon the earlier reports. The Assembly included a broad cross-section of American higher education, and the plan for including those institutions in the validation of developmental work represented a unique model for insuring that CAEL outcomes were sound. Another part of the validation work (described in the next chapter) was to insure that the assessment materials and procedures were adequate from an educational and measurement standpoint—especially that they had satisfactory reliability and validity. Thus, the validation work involved three types of institutional participation:

- Review and critique of materials
- Experimental use of materials by students and faculty in actual programs
- Field research in selected institutions to determine the educational and technical quality of different assessment methods.

These three types of activities provided three levels of participation, depending upon the interest of the institution and the maturity of its relevant programs. These levels of participation were described in a prospectus inviting all Assembly members to participate. More than 80 institutions did so at either the first or second level and provided feedback useful in revising the materials.

Those institutions were provided gratis reports for use in the tryout and were asked to return evaluation forms from students and faculty in early spring. Some 400 such forms were received and, in general, the feedback was quite favorable. Some three-fourths of the respondents found the materials useful to some degree, and when they did not, it was usually because the institution did not have a program relevant to the particular materials in question.

Authors of the CAEL reports analyzed the evaluations and gleaned a variety of specific suggestions for revision and improvement. Also, the authors identified

from the feedback several "critical issues" concerning the revision of each report. Those issues served as agendas for discussion sessions at the spring, 1976 Assembly meeting. Following this full year of tryout, feedback, and discussion, revised drafts of all reports were completed and reviewed in the summer of 1976.

On the basis of this review, there were relatively few major issues raised concerning the original reports. A number of improvements were made, but there were almost no fundamental redirections or serious questioning of basic assumptions underlying the assessment procedures suggested. Probably the most significant change in the series of reports was the addition of the fifth handbook to fill a serious gap recognized in the area of sponsored learning.

Otherwise, most of the revisions in the handbooks concerned changes in the emphasis or substance of the original report, addition of new material to redress omissions, and improvements in the usefulness of the reports to the reader. There were also substantive revisions or extensions of the student guides, but with those reports the main emphasis was upon improving their "how to" quality and their usefulness to students.

In addition to reviewing experimental reports, CAEL institutions were encouraged to develop local adaptations that would demonstrate how particular assessment principles or procedures could be modified to fit special circumstances or learning objectives. There was little formal response to this particular invitation, but it was evident that there was developmental activity at scores of institutions across the country. That fact provided ample assurance that there was little danger of premature solutions or standardized methods of assessment.

All final revisions of working papers and institutional reports were reviewed by the CAEL Executive Committee in the summer of 1976. With some additional revisions requested by the Committee, all handbooks and student guides were accepted for publication (Items 48-55 in Appendix A); two of the five institutional reports were judged by the Executive Committee to incorporate sufficient new material to warrant a new publication (Items 46 and 47).

IV. Validation Research*

The previous chapter described the tryout and revision of experimental CAEL assessment materials. That process contributed to a consensual validation among users, especially with respect to the substance and feasibility of assessment procedures. Extensive field studies were another major component of the validation. This chapter describes some highlights of that validation research. The purpose here is not to document the research, but to consider a few major findings and their possible implications. For details readers are urged to consult *The CAEL Validation Report* (45), which is a useful resource for a variety of issues concerning the quality of assessment.

Validation studies are important for two reasons. First, systematic research is needed as a basis for suggesting revisions in assessment methods and for the continuing development of benchmarks for improving assessment practices. Second, in addition to the obvious need for assessment methods that warrant the confidence of educators who use them, it is also necessary to meet the usual requirements of acceptable measurement practice if credit earned through experiential learning is not to represent discounted currency in higher education. If credit for experiential learning is to be broadly acceptable, the assessment process must be characterized by especially firm quality control. This means demonstration of adequate reliability and validity of evaluation methods. It is important to recognize that reliability and validity are not statistical abstractions but represent the most fundamental basis upon which one decides whether assessment is defensible. For "reliability" one might well read "adequate consistency in assessment to insure equity to individual students." Validity frequently means reasonable agreement among interested parties concerning what learning outcomes are required of the student. Furthermore, it is highly desirable to show that good assessment is in itself a beneficial learning experience for the student.

Favorable testimony is not sufficient for these demonstrations. They are complex questions that require careful study and good evidence. The principal purpose of the validation research was to provide the concrete data that are helpful and necessary in showing whether the assessment process is consistent and fair and in what respects it needs to be improved in the interest of students and institutions.

Another way of looking at the validation research is to ask what was validated—instruments, reports, procedures? It is clear that CAEL did not produce instruments in the sense of standardized tests, but through the developmental work reported in the working papers CAEL did foster certain assessment procedures. These procedures incorporated a variety of principles and guidelines that were suggested by (a) the experience and careful analysis of the many individuals involved in the developmental work and (b) technical understanding of assessment built up through the long history of educational measurement. It is the reasonableness and feasibility of these procedures that was put to the test in the validation studies.

Finally, two types of studies were represented in the validation research.

*This chapter is based upon *The CAEL Validation Report*. Appreciation is expressed to those who contributed to that report.

Some studies tested *assumptions* that were implied by the assessment procedures outlined in the working papers (e.g., the assumption that faculty members can agree reasonably well as to what types of learning are creditable). That type of study was often based upon illustrative materials. The second type of study tested *assessment practices* (e.g., whether faculty are reasonably consistent when they award credit for learning described in a particular portfolio). A brief description of the studies gives some indication of the specific issues that were addressed.

THE NATURE OF THE STUDIES

In designing the validation research, the first consideration was to focus on evaluating principles and practices reflected in the developmental work in the four major priority areas:

- Assessment of interpersonal skills
- Use of portfolios in assessing nonsponsored learning
- Assessing the learning outcomes of work experience
- Use of expert judgment in assessing learning outcomes

What needed to be evaluated was the adequacy of principles and practices at specific steps in the assessment process. Throughout its work, CAEL found the following six steps to be a useful representation of assessment:

1. *Identify* the learning acquired or intended
2. *Articulate* the learning to educational goals or academic degree
3. *Document* the learning experience or outcome
4. *Measure* the extent and character of learning
5. *Evaluate* whether learning meets an acceptable standard
6. *Transcribe* the credit or recognition

Thus, the validation research was designed to evaluate the educational and technical adequacy of those steps as they were represented in the different areas of developmental work. For example, if portfolio assessment is to stand up under scrutiny, it is necessary to show that faculty agree reasonably well in identifying what learning is creditable, that learning is adequately documented, etc. Ten validation studies were carried out. The specific issues addressed in the studies are indicated by their titles, which are stated as questions:

Assessing Interpersonal Skills

1. Can faculty differentiate various interpersonal competences and their relevance to degree programs?
2. Do different assessors agree on the level of interpersonal competence students have acquired?
3. What is the educational value to the student of the assessment of interpersonal skills?

Portfolio Assessment

4. Do faculty agree on the amount of credit awarded for portfolios?
5. Do faculty agree on what constitutes college-level learning?
6. Do faculty agree on the type of documentation required as evidence of learning?
7. What is the educational value to the student in developing a portfolio and having it assessed?

Assessing Work Competence

8. Do faculty agree on the amount of credit to be awarded for work experience?
9. Do faculty agree on assigning credit for work experience to particular courses?
10. Do students and supervisors agree on what work competences were acquired?

In order to insure that the results would have generality, it was necessary that each of these ten studies involve a group of cooperating institutions. Furthermore, these questions suggested interesting comparisons across institutions. The ten studies provide the primary focus of the validation research and the basis for the findings reported in this chapter.

There was, however, an additional objective in the validation work. That was to encourage individual institutions to undertake their own local quality control studies. Facilitation of such local studies was a particularly appropriate way to carry out validation work relevant to the fourth priority area of expert judgment—partly because quality control studies place special emphasis upon the consistency of expert judgment, and partly because expert judgment was involved in each of the other priority areas and did not itself provide a substantive focus for research questions. Several institutions did carry out such studies, based partly upon a model provided. The model and three selected studies (from Alverno College, Antioch College, and Thomas Edison College) are included in *The CAEL Validation Report* (45).

The ten interinstitutional validation studies were carried out by ETS staff in cooperation with the following 24 institutions:

Alverno College
Antioch College
Community College of Vermont
Delaware County Community College
Empire State College
Governors State University
Hartwick College
LaGuardia Community College
Macalester College
Metropolitan College, St. Louis University
Metropolitan State University
New College, University of Alabama

North Carolina Agricultural and Technical State University
Notre Dame College (Missouri)
San Francisco State University
Staten Island Community College
Stephens College
Texas Christian University
Thomas A. Edison College
University of Akron
University of California/Los Angeles
University of Missouri
University of Oregon
Wichita State University

The individual participants are listed in Appendix B. The studies were planned in the summer and fall of 1975, the data were collected during that winter, the results were analyzed in the spring and summer of 1976, and the findings were reported in the fall of that year.

All of the data in this validation research represent judgments of one sort or another, usually faculty judgments. Two general types of questions were put to this judgmental data: (1) questions concerning differences among groups (e.g., departments, institutions, disciplines), and (2) questions concerning the consistency of judgments among faculty within a single group.

These two types of questions have quite different educational implications. Faculty judgment in two institutions may differ on the amount of credit a particular instance of learning deserves and the difference may be justifiable. Different treatment of the same learning may be dictated by different programs, degrees, or educational philosophy. On the other hand, faculty within a particular unit are presumably working on the basis of the same or at least comparable procedures, policies, and guidelines. In this latter case a reasonable degree of consistency among judgments is expected as evidence of commonly viewed objectives and an equitably administered program. With each set of data it is legitimate to ask, "To what extent *should* there be faculty agreement within and across institutions?"

Before commenting on the results of this research, it is important to note that any summary of conclusions and implications runs some danger of appearing to overgeneralize from one particular set of studies. There are significant qualifications that may limit generality and may condition conclusions. Perhaps the most critical qualification concerns representativeness. In attempting to collect common information that may have some useful generality, field research is almost inevitably nonrepresentative in some degree. It is certainly not clear, for example, that the institutions, faculty, and students involved in this work are completely representative of all those now participating in such programs or who might do so later.

Furthermore, research procedures and materials do not exactly match those likely to be found in a particular real situation. They are probably less complete because they focus on some particular question under study, and they usually do not involve students in the same direct way that an operational assessment process would. Because of these considerations, field research can seldom be taken at full face value, and it is the gross character of the research situation and the findings that matter.

SOME SELECTED FINDINGS

For the purposes of this summary report, six findings have been selected that seem especially interesting and important. Since space has necessitated limiting the description of these six findings, the intention in each case is only to provide a rough idea of the nature of the study, some of the data that lead to the conclusion stated, and some comment on possible implications.

Readers should certainly not regard information presented here as the full story, but only as an invitation to examine these issues more completely. *The CAEL Validation Report* (45) presents a detailed description of these and other results, the data upon which they were based, and the methods of analysis.

Finding 1: Faculty did agree reasonably well in rating students' interpersonal competence in a counseling situation, but the interpersonal domain and its relation to the curriculum does not typically seem well understood.

If individual institutions are crediting students for interpersonal competence relevant to their degree objective, one would expect the faculty within each institution to agree reasonably well on which students exhibit the competence and which do not. Eight institutions participated in a test of that assumption by obtaining two independent assessments of students by each of two methods. In each college about 15 students were assessed in an interview situation; the same students were also assessed in a role-playing situation.

Reliability coefficients were computed for the two faculty judgments in each situation. The results are shown in Figure 1. There was naturally a good deal of variation from institution to institution because the individual samples were not large, but the median coefficient gives a fairly stable estimate of reliability. The median was about .70* in both methods of assessment. A coefficient of .00 would indicate no agreement and 1.00 would mean perfect agreement, but neither extreme ordinarily occurs. A reliability of .70 is not high but is certainly reasonable and not atypical for judgments of this sort.

This result suggests that these faculty knew the competence when they saw it. Furthermore, the results indicate that this competence can be adequately assessed either through direct observation of simulated performance or through an evaluation interview. This finding is potentially important because an interview procedure might be significantly more flexible and less costly than would be especially designed role-playing simulations or observations of actual performance in real situations. It is possible, however, that this finding applies only to this particular type of interpersonal competence.

The data also suggested an important weakness in the assessment of interpersonal competence; that is, that skill of this kind is not clearly delineated in the minds of the faculty. There were several indications: There was quite poor faculty agreement as to whether particular instances of interpersonal competence were creditable in particular programs. Judgments varied quite widely across institutions and departments within institutions as to how much credit particular instances of

*All reliabilities cited here are corrected so as to represent a two-rater composite regardless of the numbers of raters involved.

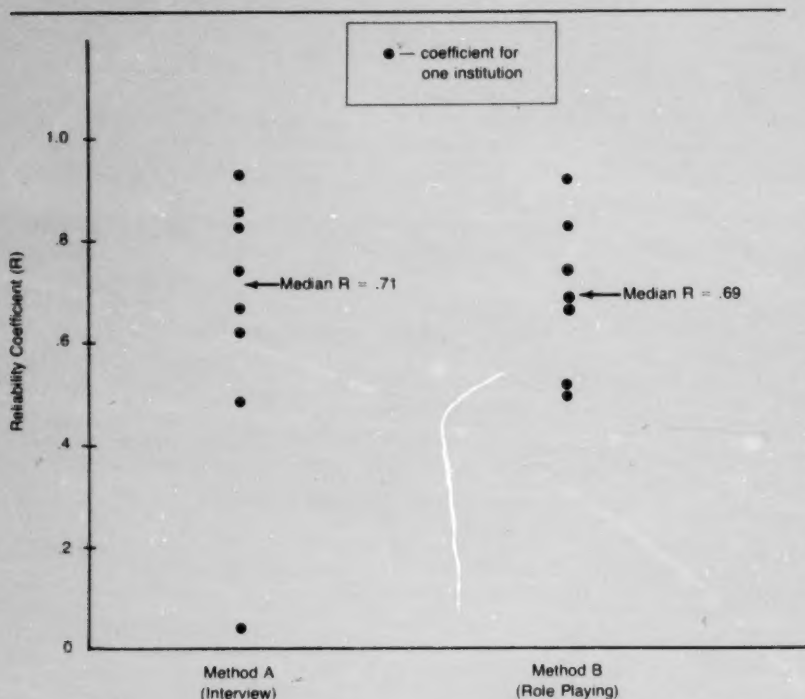


Figure 1. Reliability of assessing interpersonal competence in a counseling situation—two methods of assessment in eight institutions. (One coefficient not available.)

acquired competence might be worth. Finally, faculty were not able to distinguish reliably between different aspects of interpersonal competence in this situation.

Taken together, these results suggest that interpersonal competence can be reliably assessed, but that there is likely much work to do in clarifying what the competences are and how they relate to educational objectives and degree programs. CAEL developmental work in this area is a good beginning. Next steps need to focus upon research that will improve the measurement of this complex construct in ways that will make it more understandable and useful to faculty and students.

Finding 2: Faculty agreed reasonably well in assessing portfolios, but there was less general agreement as to whether particular forms of learning were college level.

Two types of data were gathered in order to determine how well faculty agree if they undertake independent assessments of credit to be awarded individual student portfolios describing prior learning. Ten institutions assessed all or most of

a common set of 14 illustrative portfolios that were provided. Six of those institutions also submitted data on a set of about 15 of their own student portfolios. In each case two independent assessments were provided, and each assessment was done by one or more individuals, depending upon the content of the portfolio and the local assessment procedures.

The results are shown in Figure 2. The reliability coefficients vary from institution to institution, but the median lies in the mid-seventies and this indicates reasonably good agreement for judgments of this sort. This finding is important because it indicates that, by and large, students do not receive credit awards that vary substantially depending merely upon whoever happens to evaluate the portfolio.

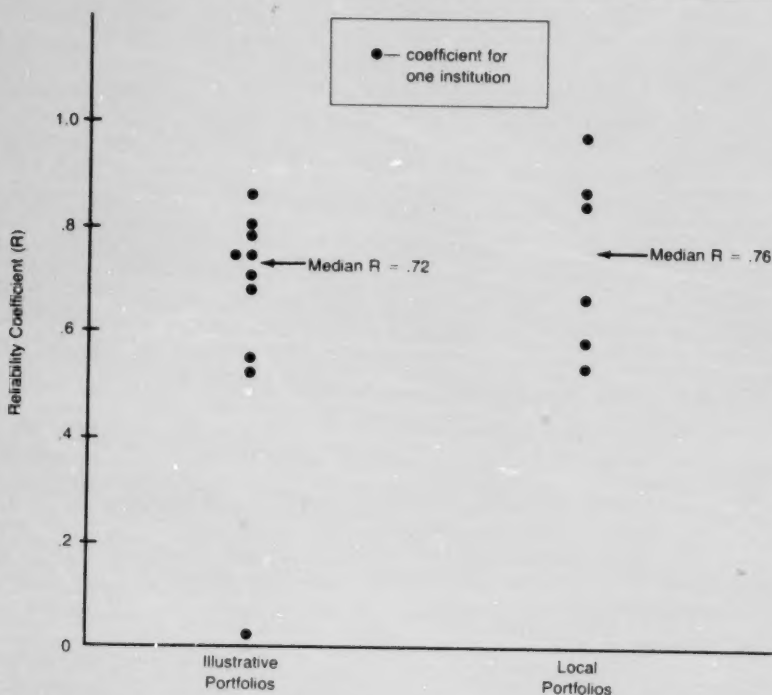


Figure 2. Reliability of portfolio assessment—data from ten colleges rating a standard set of portfolios; additional data on local portfolio assessment for six of those colleges.

The main weaknesses in portfolio assessment suggested by this field research concern assumptions underlying the assessment process. In a related study, for example, there was only modest agreement among faculty within institutions as to what constitutes college-level learning. In that study several faculty were asked to rate the creditability of each of 15 instances of learning often found

in portfolios. The reliability of those ratings was substantially lower than the reliability of portfolio assessment (in the .50s rather than the .70s). These are interesting results that seem somewhat contradictory. One might expect the magnitude of the reliabilities to be just the reverse—i.e., how can faculty agree on the *amount* of credit a portfolio is due if there is disagreement on *what* is creditable?

There are several possible explanations. One is the fact that portfolios often include several types of learning. Disagreement on one type may be offset by disagreement on another so that two overall assessments may be similar. In the same vein, a portfolio assessment is often, if not typically, based upon the judgment of more than one rater. Again, this permits offsetting errors.

Also, there may be a tendency for those experienced in assessing portfolios to develop informal or implicit understandings about different types of portfolios. This may result in fairly consistent agreement in credit awards, even though the rationale concerning what learning is creditable may be inadequate. Part of that understanding could be related to the background or reputation (halo) the individual student brings to the assessment. Such factors might sometimes enhance apparent agreement despite the lack of a clearly thought-out educational rationale.

Another possible explanation for the different level of faculty agreement on portfolio assessment and on what is creditable is suggested by the way the data were collected. Portfolios were typically assessed by people more likely to be expert in the particular types of learning involved, but the study regarding what is creditable involved faculty judgments about various types of learning that individual faculty members might not consider to be their area of expertise (see examples in Figure 6). Thus, it may be that good agreement on what is creditable exists only in the minds of specialists in each type of learning. No one can be an expert on all types of learning, but this begs the question as to who speaks in a common voice on such a fundamental institutional issue—i.e., what learning that institution is willing to credit?

It seems unlikely that any one of these possibilities fully explains the apparent contradiction in observing better agreement on assessing portfolios than on the question of what is creditable; possibly each of these explanations is involved to some degree. But there is one other piece of information concerning assumptions underlying portfolio assessment that warrants brief mention. In another study there was frequent disagreement among faculty as to what documentation should be required to support claims for different types of learning (e.g., letters, work records, products, etc.). This may also reflect inadequate agreement on what is creditable.

The reasonable consistency in credit awards for portfolios is a critical finding, but the results do suggest a need for an improved basis for faculty consensus if assessment practices are to be fully rationalized and generalized to larger groups of faculty and students. In the course of this work, many institutions indicated that institutional policies and procedures and staff experience are still in a developing stage. This is confirmed by the research findings, and implies a need for better institutional guidelines regarding assessment practices, and a need for continuing faculty development programs.

Finding 3: Students' claims to specific work competences were corroborated by supervisors, but inexperienced faculty often disagreed on the credit due and its relation to the curriculum.

Studies in this area drew upon a specialized assessment model designed to identify fairly specific work competences related to particular occupational programs (50). Figure 3 illustrates three steps in an assessment process (circles) and three basic underlying assumptions (boxes). CAEL validation research included three studies concerning those assumptions: whether supervisors verify student claims, whether faculty agree on the relevance of the competences to the student's educational program, and whether faculty agree on the amount of credit granted.

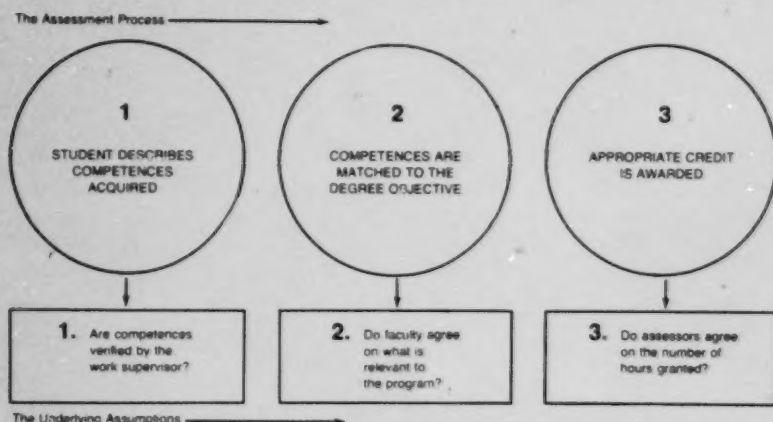


Figure 3. Underlying assumptions in awarding credit for specific work competences.

The first assumption is critical since, if supervisors do not verify the learning, everything that follows may be highly questionable. The extent of such verification was examined in the following manner. Students indicated on detailed task checklists what work competences they had acquired in their area of specialization. The student's work supervisor completed the same checklist, and the answers were compared. Figure 4 illustrates the data for 35 student-supervisor pairs in the field of law enforcement. The graph indicates that the average number of tasks checked in different content areas was quite similar for students and supervisors. The percentages at the bottom of the figure indicate that, on the average, about 75 percent of the particular tasks checked by each student were verified by the supervisor. This seems quite high considering that there were 250 tasks and some inevitable degree of ambiguity and overlap among them.

It is apparent, then, that a strength of this assessment model is the good agreement between students and supervisors as to what the student had actually learned. That is, there was little evidence of unrealistic claims by students. The

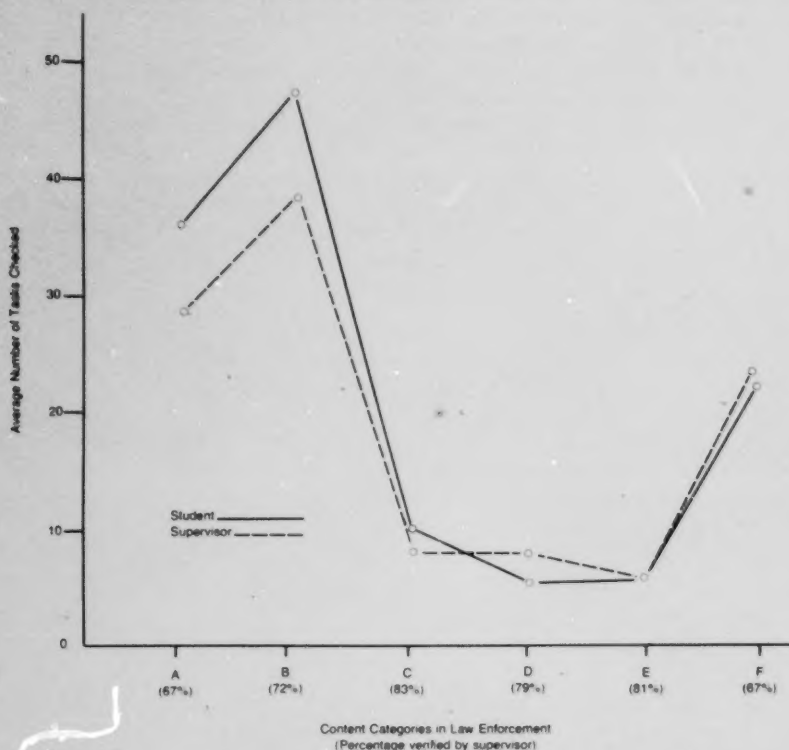


Figure 4. Verification of student claims to work competence—correspondence of tasks checked by students and their supervisors in different content areas of law enforcement.

results of two other studies in this area were not as uniformly encouraging. There was, for example, limited evidence of faculty agreement as to the relevance of specific competences to particular curriculum areas. With respect to credit awards, there was reasonably good consistency among raters in discriminating the relative level of competence among students (Median $R = .76$). A fairly important weakness, however, was the fact that raters often differed substantially in the general level of credit they characteristically awarded. Both of these weaknesses may have resulted from the fact that most of these particular faculty participants had limited familiarity with the assessment of experiential learning.

The results of the field research in this area suggest that the detailed checklist procedure for identifying and crediting specific work competences related to particular occupational programs is not something that can be carried out easily with little experience. It appears that the approach is reasonably sound for the limited

purpose intended, provided faculty have a consensual framework that specifies the general level of credit that is appropriate and how credit for such learning fits the curriculum. Again, there is indication of the same need for institutional guidelines and faculty development that was cited above. These results suggest that there is danger of fairly substantial discrepancies in credit awards if faculty judges are inexperienced. The next finding provides a good example.

Finding 4: Analysis of assessments within institutions showed instances of consistent and substantial differences between individual faculty raters.

Consistent differences between raters is an important and well-known source of error in most forms of expert judgment. In measurement literature it has often been called the "rater-error"; in the classroom the corollary term is "grading differences." In some of the CAEL validation studies it was possible to examine such differences, and in some instances the rater-error was quite pronounced.

Figure 5 illustrates the problem; it shows judgments of two faculty raters concerning how much credit eight students ought to receive for demonstrated work competence. The two solid lines represent profiles of the two raters' judgments. It is apparent that the credit awards of rater A are considerably higher than those of rater B, but the pattern is quite similar. This is strikingly demonstrated by arbitrarily

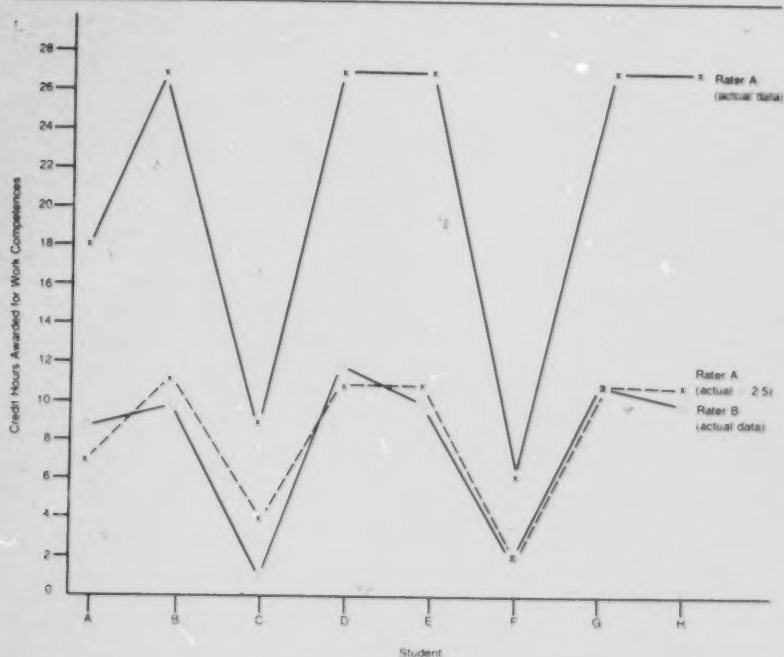


Figure 5. An illustration of the "rater-error."

dividing all of rater A's credit awards by a factor of two and a half (the dashed line). Thus the two raters made very consistent discriminations among the eight students, but somehow they had a very different idea of how much credit they should be granting.

All judges, but particularly inexperienced judges, may make radically different credit awards because of important differences in the assumptions they make. For example, different raters may make different assumptions regarding the general level of credit considered appropriate, what learning is creditable, whether a particular instance of learning overlaps with other credit, whether learning is still current, how to translate competence into hours, and so on. When two raters rate independently, such different assumptions become apparent. Discrepancies can be rectified in discussion if there are adequate policies and guidelines to call upon. The important implication is that two opinions should be sought wherever possible, especially if raters are relatively inexperienced.

Finding 5: Comparisons across institutions showed many instances of substantial differences in the way various institutions evaluated the same learning.

In some instances the CAEL validation research employed illustrative portfolios and materials that were common across institutions. This permitted direct comparison of institutional points of view and institutional differences in assessment practices. One beneficial result of such comparisons is to provide individual institutions with a better basis for evaluating their own policies and procedures.

Figure 6 gives one example of how institutions differ regarding credit policy. For four selected types of learning, the figure shows what level of credit was considered appropriate by five faculty members at each of three colleges. The average ratings from the three colleges agreed quite closely on the first two types of learning, but pulled apart dramatically on the last two. Figure 7 provides another example. Whereas faculty within individual institutions agreed fairly well on how much credit particular portfolios were worth, there were quite large differences across institutions in the average credit awarded for the same set of portfolios.

Of course, in a pluralistic system of higher education there is nothing inherently inappropriate in different institutions being willing to award different amounts of credit for the same learning. On the other hand, wide differences in credit practices from one institution to another do beg the question as to whether standards are receiving the attention they deserve and whether each institution has a satisfactory rationale for its credit policy.

Finding 6: Though some results were conflicting, there was clear evidence of positive educational value of portfolio assessment to the student.

A very important question concerning the assessment of experiential learning is whether the assessment process itself is beneficial in the personal development of the student. That question was examined in CAEL validation research in the following manner. A number of students—some who had participated in assessment and some who had not—were asked to answer several questions in writing

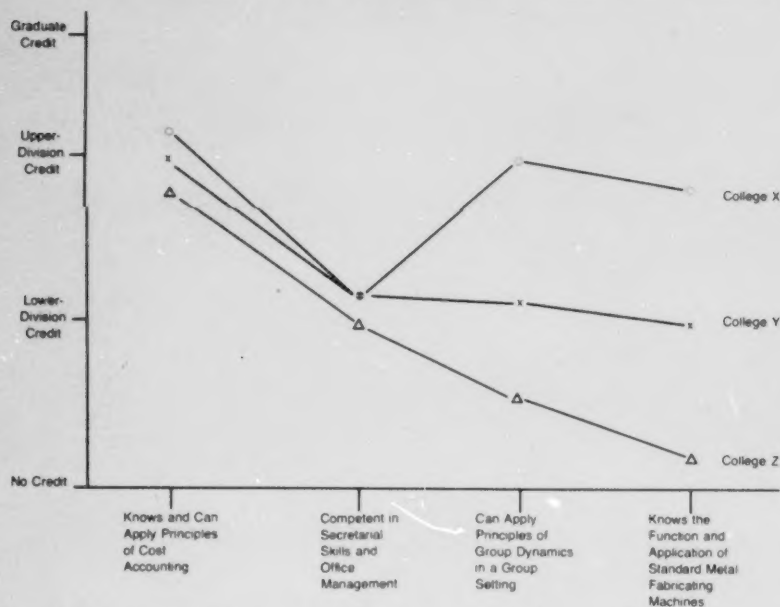


Figure 6. Different institutional views concerning what is creditable (average of five faculty ratings of the appropriate level of credit for four selected learning instances at three colleges).

about their learning and its relation to their personal plans. Then four experienced faculty judges were asked to rate, without knowing which student was which, the degree of self-awareness displayed in each answer.

The results of one study are shown in Figure 8. A significantly larger percentage of those students who had been through portfolio assessment were rated high in self-awareness as compared with the students who had not been through assessment. No such effect was found in another study that involved the assessment of interpersonal skill. It seems likely that the positive finding for portfolio assessment is due to the fact that this assessment procedure is specifically designed to help the student understand personal goals and educational objectives. Since earlier findings suggested a lack of clarity in the relationship of interpersonal skills to educational objectives, it is not surprising that corresponding evidence was not found for beneficial effects of assessing interpersonal skill.

This type of experiment was a demanding test of the beneficial effects of assessment. It is quite significant and encouraging that a difference between the pre- and postassessment groups was clearly significant in one study at least, but the findings indicate that this effect was not large. More sensitive methods for evaluating the beneficial effects of assessment would be extremely helpful. These

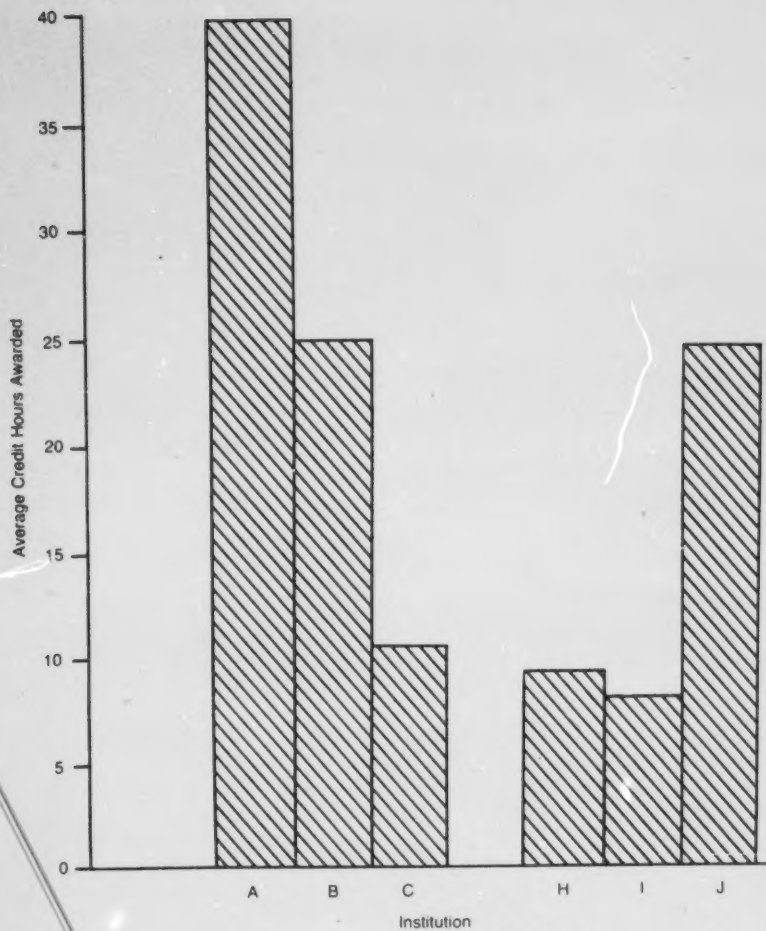


Figure 7. Institutional differences in evaluating a set of 14 portfolios (Institutions A, B, and C all evaluated the same set of portfolios; Institutions H, I, and J evaluated another set of portfolios highly similar to the first set).

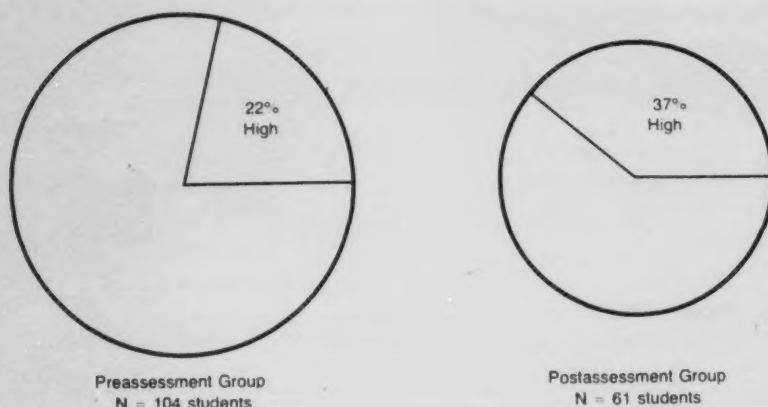


Figure 8. Greater incidence of "high" self-awareness among students who had participated in portfolio assessment.

methods, in turn, might help to focus assessment practices more effectively upon outcomes of value to the student.

In evaluating these selected results, two final observations are useful. First, it was certainly expected that some findings would appear favorable and some not so favorable. A major purpose of the CAEL validation research was to help in identifying strengths and weaknesses of assessment practices and ambiguous issues that need more attention than they have received. The preceding pages indicate that that purpose was well-served. Second, most of the issues addressed here apply with equal force to traditional as well as nontraditional educational programs and assessment practices. They should be matters of concern to faculty members in all institutions.

V. Operational Models—The Challenge Of Implementation

CAEL's primary objectives were rightly focused upon the development and validation of improved methods, techniques, and principles specifically concerned with the assessment problem. But even before CAEL got underway officially, the group that was to become the CAEL Steering Committee recognized that improving the assessment of experiential learning involved much more than merely developing better ways to assess. Since such assessment takes place in a larger academic context, it is necessary to work out effective procedures for integrating the assessment process with traditional procedures and structures. Thus the original CAEL proposal cited the need for "implementation studies."

The perceived need was to organize an activity that would help institutions (a) systematically examine the most important problems and implications in implementing new assessment procedures in various types of programs involving experiential learning, and (b) work toward clarification and documentation of desirable working procedures for integrating assessment into the fabric of the institution—that is, an improved operational model. It was with this rationale that CAEL proposed, in its second year, an Operational Models project.

The basic plan was to select 12 institutions facing rather different implementation problems and to provide a cooperative context for each to devote special attention to its particular concerns. The objectives were not only to strengthen assessment practices on those campuses and to develop useful techniques of implementation, but also to publish and disseminate models giving special attention to institutional policy issues and the problems of students moving through programs. That proposal was accepted and funded by the Fund for the Improvement of Postsecondary Education. This chapter gives a brief overview of the nature of the work and some of its most useful outcomes.

THE NATURE OF THE PROJECT

The Operational Models project had a built-in tension right from the beginning—namely, to what extent should such a project foster independent developmental work on 12 campuses or insist that all participating institutions work toward a set of common objectives? The plan of the project assumed that either extreme was inappropriate, but that a rational focus and some degree of common purpose was necessary so that the work of the institutions would be mutually enhancing and supportive. Consequently, the overall strategy of the project emphasized three integrating themes: a systems approach, the articulation of a model, and emphasis upon either the problem of standards or the problem of costs. These three themes can be amplified as follows.

A systems approach was suggested because the assessment of experiential learning involves a student seeking credit within a programmatic and institutional context. Whether it is done poorly or well, assessment is not an isolated event. It occurs within an existing educational context of people, academic policies, administrative procedures, organizational structures, and so on. In addition to the immediate problem of assessment, institutions must deal with many other prob-

lems concerning educational rationale, resource allocation, and accountability. These issues involve many interests on a campus.

This whole process is actually a complex system of policies, procedures, and people. It is important to tackle the assessment problem from a holistic viewpoint that takes into proper account the problems institutions, faculty members, and students actually have to face in working through the entire assessment procedure. In this context a "systems approach" to developing an operational model means a systematic analysis of all the ways in which an assessment procedure is connected with the educational process in an existing institution.

Two types of analysis have special value: one is to describe the functional relationships among the important parts of an assessment program; another is to describe the steps through which a student moves in completing the assessment procedure. In either case, the program can be regarded as an interrelated system of components, and the task is to describe the components and how they are related. In so doing, one creates a model of the process. The purpose is to better understand how assessment affects and is affected by other parts of the system—i.e., academic regulations, administrative structure, financial considerations, faculty attitudes, and so on.

From another perspective, the task implied by a systems analysis would be to identify the critical points in the model and to specify effective ways of dealing with them. Examples of critical points would be instances where important decisions are made or practices are monitored. In whatever way the model is articulated or depicted, the end result should be an improved conception of how the assessment process operates or ought to operate within the overall educational context. In a sense an operational model is a theoretical picture of a system; it should also be a practical guide to improving the operation of the program, and such practical value was emphasized in the Operational Models project. In order to be practical and useful, it was necessary for the project to focus upon important substantive issues.

The two substantive issues chosen were *financing* and *standards*. Both cost effectiveness and pricing are critical aspects of assessment that eventually have a decisive bearing on most programs. For example, some forms of assessment may be technically desirable but prohibitively expensive. Prior to this project, very little systematic research attention had been given to the costs of assessing experiential learning and how financial considerations might affect such programs. Definition of standards is another critical issue stemming from the highly individual character of most experiential learning. Students need clear goals and a basis for understanding their personal development. Institutions need a clear sense of instructional objectives and the ways in which those objectives relate to mission. Third parties need clear evidence of learning in order to maintain credibility of programs not supported by time-honored familiarity and tradition.

These two functions—financing and defining standards—are obviously essential to an educational program, but there is another reason that both are centrally important in developing an operational model. Each lies at the heart of the "system" of academic policies and procedures within which a program is nested. That is, defining criterion standards of performance in an educational program necessarily engages virtually all major educational questions that can be asked about a learning program. Similarly, thoroughly describing and justifying the financing of a program requires examining all of its important administrative aspects.

Those three themes—the systems approach, the development of a model, and the emphasis on costs and standards—together determined the substance of the work. There were many participants. The project was carried out under the policy direction of the CAEL Steering Committee. ETS staff developed the grant proposal and background papers, carried out the organizing and administrative work of the project, and published its various reports. The institutions and their faculty carried out the developmental work on the individual campuses, wrote the institutional reports, and undertook extensive dissemination activities, including seminars at the fall 1976 CAEL Assembly meeting and local workshops. An independent audit committee (John Jacobson, Chairman; Patricia Thrash; and William O'Connell) provided summative evaluation at the end of the project and formative evaluation at critical stages. The principal stages are shown in Figure 9.

The first stage was primarily concerned with the development of reference materials and background papers, which served as agenda materials for an initial fall workshop intended to help clarify institutional objectives for the project. There followed a six-month period during which time the institutions worked on their individual models. This involved deciding what components of their local program needed special attention and then addressing the following questions to each of the components:

- What are the major issues involved?
- What policies need to be defined?
- What documents need to be developed?
- What procedures need to be specified?
- What policy roles need to be clarified?
- What administrative responsibilities need to be assigned?
- How are the components related, one to the other?

Those questions helped to stimulate local dialogue and preparation of draft models for discussion at a spring workshop. The emphasis in that workshop was on mutual critique and formative evaluation. There followed the production of reports and development of plans for dissemination activities. Aside from the publication of the models themselves, a major dissemination activity was a series of seminars at the fall Assembly meeting. In addition, most of the institutions organized a local workshop, partly to disseminate their work but also to develop local networks of individuals interested in implementation problems.

The following paragraphs include a summary of the outcomes of all this activity, the Audit Committee's evaluative overview, and some final suggestions regarding implications.

THE OUTCOMES OF THE WORK

Given the nature of the Operational Models project and the general strategy outlined above, what types of outcomes might one expect from such activities? Dealing with complex matters of educational objectives and policy suggests that clarification of *theoretical* issues would be one type of desirable outcome. Certainly *practical* help in designing procedures that are effective in the routine operation of a program would be an even more important outcome. Potentially, the systems

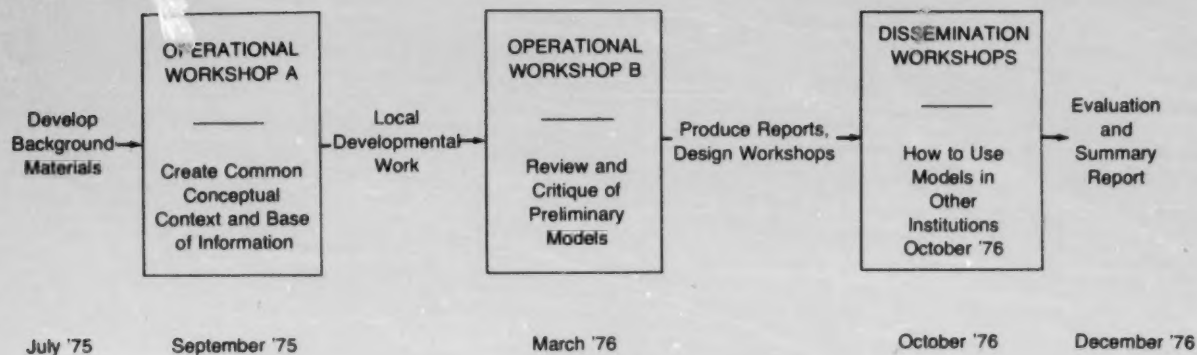


Figure 9. General plan for developing operational models for implementing assessment procedures.

approach could also be effective in clarifying *political* issues that often impede the orderly development of new activities, aside from the intrinsic merit of the activities.

One can set aside fairly quickly much hope of improving understanding of the political dynamics of educational reform—at least any generalizable understanding disseminated through the institutional reports. Such outcomes were considered desirable, but they were not an objective of the project and were largely written off at the beginning on the assumption that sensitive local political issues, even if critical in the development of a program, were not likely to be discussed in useful detail in a public report. That was a correct assumption.

With respect to useful theoretical outcomes, one thinks primarily of a successful effort to better conceptualize the assessment process or major policy issues arising in that process. In this instance there are good grounds for claiming beneficial outcomes. More than half of the institutions made a serious and apparently successful effort to use a systems approach to improve their understanding of the pieces of their programs, how they related to one another, and how they ought to be integrated with the rest of the institution. Several institutions reported the actual process of modeling to be particularly useful. Antioch College suggested that the "general implications of the process of building a model as a means of identifying roles of administrators, faculty, and students in carrying out and assessing a program centered on experiential learning are far more important than the specific models already developed."

Furthermore, most institutions made an effort to identify and deal with particular problems and issues at a deeper level of understanding than simply describing procedures, though the approaches varied considerably. For example, in its report the University of Kentucky undertook an extended discussion of the rationale of its program, whereas the report of Metropolitan State University summarized research data on questions pertinent to important aspects of its program. Additional issues addressed by other institutions (cited below) were interesting and useful for both theoretical and practical reasons.

As originally conceived, the project placed primary emphasis upon practical outcomes—i.e., broadening the actual use of new assessment methods, strengthening expertise in a number of institutions, and producing a variety of exemplary models that could be put to direct use by other institutions. On an overall basis these practical outcomes were certainly realized, at least in the opinion of CAEL and the Audit Committee as well, judging from their comments in the following section.

With respect to practical outcomes, the work of the 12 institutions differed considerably because the programs varied or were at different stages of development. The Universities of Oregon and Kentucky were at the stage of formulating and clarifying issues, and their models are useful for that purpose. On the other hand, Union College, the California Consortium, Memphis State University, and San Francisco State University were at a stage of designing or improving documents and procedures necessary for the effective operation of their programs. The reports of those institutions reflect that emphasis and provide many helpful prototypes, specimens, and suggested procedures.

The remaining six institutions (Antioch College, Community College of Vermont, Delaware County Community College, Florida International University, Metropolitan State University, and Webster College) placed much more emphasis

upon specific issues and assessment problems concerning standards or cost. It is interesting to observe that all of these institutions placed a special emphasis upon the systems approach whereas most of the former six did not. This suggests that a systems analysis of an assessment program is likely to prove more beneficial within a more highly developed program.

In several cases it appeared that the institution's attempt to work through the systems model clearly facilitated its grappling with significant theoretical issues and its achieving some degree of closure on some practical issues. For example, in looking carefully at the sequence of decisions in its assessment procedure, Florida International University made a surprising and important discovery: its negotiated learning contracts seemed to involve previously unrecognized implicit as well as explicit standards. Community College of Vermont dealt in a practical way with the value-laden issue of how to yield an appropriate degree of autonomy to a local review committee and also maintain consistency in assessment and quality assurance in its programs. Both Webster College and Delaware County Community College dealt with fiscal subtleties of theoretical as well as practical import. Both models indicated their assessment process to be cost effective.

The specific outcomes of the Operational Models project can be summarized as follows:

1. The project developed twelve models for implementing assessment programs, ten of which were published by CAEL and distributed to its 250 member institutions (28-34). These included:
 - Two models of new programs at traditional institutions—a large public university (Memphis State University) and a small private college (Union College).
 - Two models of well-established programs at highly nontraditional but very different institutions—an upper-division state university (Metropolitan State University) and a community-based two-year college (Community College of Vermont).
 - Two models of the financing of assessment programs—a private college (Webster College) and a public college (Delaware County Community College).
 - Two models concerned with the coordination of assessment policy and procedure in a complex system—a network institution (Antioch College) and a major state system (The California Consortium).
 - Two models especially concerned with assessment of broad educational competences but otherwise quite different institutions—an innovative upper-division university (Florida International University) and a traditional state university (University of Kentucky).
2. Those models were disseminated through a series of seminars especially developed for presentation at a national meeting of more than 300 educators (the fall 1976 CAEL Assembly).
3. Further dissemination was accomplished through a series of ten regional workshops designed not only to familiarize regional areas with the work of those institutions, but also to encourage the development of local networks of in-

interested individuals and thereby foster continued attention to problems of effectively implementing assessment procedures.

4. The project also made available a background document (27) that facilitates the development of operational models by other institutions facing similar problems.
5. These reports and activities have generated a wide variety of useful products now available through the CAEL association: assessment prototypes, specimen documents, procedural guidelines, an educational game, detailed analyses of specific assessment issues, and concrete models of operating assessment programs.
6. Finally, this work has had the direct effect of involving a large number of faculty members and students in new or enhanced learning activities, all directed toward the conscious objective of improving the education of individual students.

REPORT OF THE AUDIT COMMITTEE*

Criteria for the evaluation of the Operational Models project were developed by the project staff who felt that activity would be judged successful if:

1. Institutions do participate fully, devoting staff time to the project and turning out reports on schedule.
2. Reports do meet high standards of quality.
3. Faculty and staff of participating institutions judge the project a benefit to their institution.
4. Dissemination workshops are well attended and judged to be useful by those attending.
5. Significant numbers of institutions report plans to try out models on their own campuses.
6. In the eyes of competent, objective judges the project has made a substantial and significant contribution to increased knowledge and understanding of assessment of experiential learning.

It is the Audit team's judgment that on the whole this project has been successful in achieving its stated objectives and the criteria for evaluating its success generally have been met. All institutions seemed to participate fully in the project with the exception that two did not submit timely reports judged to be of acceptable quality and for that reason were not asked by the CAEL Steering Committee to conduct Operational Models dissemination seminars at the October Assembly meeting.

On the basis of information gained from the written reports and our interviews with team members we can assume that the projects were of benefit to their home institutions, though valid and definitive judgments cannot be made on the basis of evidence available to the Audit Committee.

*This section is taken verbatim from portions of the final project evaluation prepared by the Audit Committee—John Jacobson, Chairman; William R. O'Connell; Patricia Thrash—as it appears in the *Final Report for Operational Models Project*, pp. 7-8, 9-11.

On the whole the dissemination workshops at this Assembly meeting were well-attended by the representatives of CAEL member institutions, though there was a great range in the number of persons attracted to the various sessions. From the reactions we observed and the limited number of evaluation forms received for review, the participants seemed to feel the workshops had been useful. There were numerous indications that parts of all models were being considered for possible adoption, or as a source of new ideas on many campuses. Overall it is our judgment that this Operational Models project has made a substantial and significant contribution to increased knowledge and understanding of assessment of experiential learning . . .

In the opinion of the Audit Committee, the Operational Models project had a number of superior elements. In the first place, the teams and institutions were so selected that they were able to carry out a project rather than just think about it or agitate for it. In the second place, several advantages resulted from the fact that there were 12 institutions working together rather than separately. At the organizational meeting in St. Louis and again at the penultimate meeting in San Francisco, team members were stimulated by conversation with other teams. Also it seems that a mild and healthy spirit of competition among the teams developed, at least in some instances. A third strong point was the contribution to the teams of professional advice and information by the ETS contributing staff. The papers that were handed out at the organizational meeting in St. Louis provided a useful cognitive foundation to the work of the teams. The fact that staff was at work reminding teams of the need to meet deadlines and the additional fact that reports were to be published and that seminars were to be given at the fall meeting of CAEL gave a structure to the activities of the teams. Without such structure it would have been difficult to accomplish so much in such a short time.

While the Audit Committee was not able to identify any significant weaknesses or serious concerns, there are a few suggestions that we feel would add completion or closure to the project. The first suggestion is that it seems appropriate that the final products should be shared among all the Operational Models groups. At the October meeting of CAEL several members of the Operational Models teams expressed the wish that they could receive all of the reports prepared by their colleagues. The Audit Committee hopes that this can be arranged. [Note: Copies of all the reports have since been sent to all participating institutions.]

Another suggestion that we wish to make is that some provision be made to bring together once again all the team members from the Operational Models project. They did have an opportunity to share ideas and information at the San Francisco meeting in March, but many of them would appreciate a further chance for discussion, particularly after having read each others' reports. The format of the October CAEL meeting enabled many people to receive the benefits of the Operational Models work, but it inhibited the coming together in one room of the Operational Models teams. Perhaps the spring meeting of CAEL would be a time for a final sharing of ideas and information among those who participated in the Operational Models project. [Note: Steps have been taken to arrange a gathering of all Operational Models participants who are able to get to the spring 1977 Assembly meeting in Atlanta.]

A final suggestion is related to sharing a summary of published reports with a wider audience. Recognizing that it may be difficult to act on, the Committee

recommends the preparation for publication of a general paper about the Operational Models summarizing and comparing the models in a way that would be useful for an audience beyond the Operational Models project participants. It would enable an interested person to decide which of the models he or she wished to learn more about without necessarily having to purchase and read through all of them. [Note: An abbreviated version of this project report will be incorporated in the final summary report of the CAEL project, which will be widely distributed.]

In conclusion, the Audit Committee wishes to state its conviction that the Operational Models project has indeed done what it said it would do, as far as it is possible to judge that at the present time. Only the future will tell the extent to which these developed models will be copied by other institutions or will stimulate other institutions to develop their own models. It is clear, however, that both the process of developing the operational models and the products themselves are significant. (End of Committee Report.)

SOME IMPLICATIONS

There are several implications of this work that deserve attention. These are based both upon what was learned in the project and also upon consideration of problems with which the project did not deal.

First, the work of these twelve institutions suggests that a critical level of understanding is usually necessary before an institution can take a step beyond its current practice in generating or adopting new ideas. Especially it seems that faculty must discover for themselves the validity and appropriateness of new approaches in their local situation. Revelation doesn't usually work. This fact underscores the need for research and development projects that provide fairly prolonged and intensive faculty involvement. Such involvement was clearly a value of the general approach represented in this project.

Despite the substantial amount of work in various aspects of the standards problem, there is still limited progress in the specification of criterion standards (i.e., type and level of competence expected) in ways that facilitate clear communication to students and result in judgments that are fair and consistent. The need for further work in this area concerns both depth of analysis and breadth of application. Many types of competences have received little attention beyond annotated listings. There is much work to do in describing clear instances of student knowledge or performance that can serve as benchmarks for faculty—both in their deliberations as to what constitutes an appropriate standard and in their actually applying it to student learning.

An area of special concern is that of so-called generic competences (e.g., communication skill, critical thinking). These outcomes of general education are uniformly accorded high priority though most institutions have not yet defined these outcomes in ways that respect their subtlety and diversity and also provide an adequate basis for knowing whether the outcome has actually been achieved at a satisfactory level. The dilemma is how to find a proper balance between specificity of learning/assessment objectives and generality in the value of what is learned. The experience of this project seems to underscore the continuing difficulty in dealing with that problem.

The financing models are among the more valuable outcomes of this project

because so little good advice is available on this important issue. These two models give other institutions the benefit of concrete examples for exploring alternative cost and income assumptions. Despite the obvious value of this work, it makes even more apparent the critical issues that have yet received so little attention. Two seem especially important. One concerns the costs and benefits of alternate modes of assessment. Another concerns the indirect costs and benefits of assessing experiential learning that stand one step removed from those considerations emphasized in these two models—namely, how to evaluate the immediate and longer-term effects of a new program on students, faculty, and the institution.

An important overarching consideration in developing any new educational program is how to integrate the program into the existing structure so that the innovator, in effect, eventually puts himself out of business. This requires a conscious plan, some elements of which are visible in the models developed in this project. There is need, however, to give special attention to the nature of critical program functions (e.g., student advising, curriculum development, and quality assurance) and how those functions compare in new versus traditional programs. Making them compatible is one level of integration; having traditional units simply take over the new function may often be the more desirable end result. In either event, the integrating strategy requires attention in its own right.

A final implication of this work concerns the community of interest represented in this series of institutional projects. Assessment of experiential learning has several important commonalities: a commitment to facilitating competence, a concern for students, an interest in instruction, a willingness to mold programs to educational needs—all such values reflect, as Virginia Smith has noted, a central concern with *learning* as opposed to other priorities of college faculties. The sharing of those common values was very apparent among the participants in the CAEL Operational Models project. This observation suggests that experiential learning is an effective focus for those values and that CAEL can provide an additional associational forum beneficial to higher education generally.

VI. The Faculty Development Program

The original CAEL proposal anticipated the need for a faculty development program, and before CAEL had been under way for a full year, its Steering Committee began to voice concern that CAEL should provide for more extensive engagement of teaching faculty in its research and development program on experiential education. A number of reasons converged in this concern.

The Need for a Faculty Development Program

First, experiential education had already become a focus of marked and growing interest in higher education. There were evidences of a need for greater use of experiential learning and for more sophisticated use of its alternative forms. Its increased use was becoming an instrument for extending educational opportunity among clienteles for whom it brings both greater effectiveness and access to appropriate programs and credentials than did traditional options. In traditional higher education the greater and more apposite use of experiential learning permits a deepening and a testing of theory that both enhance learning and reinforce its effect. Some of the traditional concerns of higher education (e.g., clarification of values and development of individual maturity) are more effectively served with programs providing an infusion of experiential elements into program strategies than otherwise. These benefits apply particularly to those who pursue learning as a lifelong endeavor. The effects of experiential learning upon motivation, sensitivity to data, and the domain of educational objectives related to application of knowledge and values are prospectively substantial, especially when the experiential and the theoretical aspects of learning are astutely combined.

Second, not only was there need for greater use of experiential learning and for more sophisticated use of it, there was and is also an accompanying need for improved assessment of its learning outcomes. The state of the art in such assessment, though improving, is still relatively primitive.

There is also a complementary need for better credentialing processes and systems that become feasible if assessment is conducted so as to identify learning outcomes in publicly understandable and usable terms.

Faculty, however, are critical to the meeting of all of these three needs: for more experiential learning opportunities, for better assessment of their outcomes, and for better credentialing of these results. The faculty are critical, for it is they who will conduct the learning, are or supervise its assessors, and sanction or act as those who provide the resulting credentials. Even in institutions that had already had years of experience in experiential learning (e.g., institutions using cooperative education, those using off-campus programs, those emphasizing independent study, and the like) there was agreement upon the need for help in training faculty to clarify and choose learning objectives, to assess learning outcomes, and to redesign learning strategies in the light of disclosures through evaluation as to what had been learned and how it had been learned.

The Nature of the Program Needed

From the initial work of CAEL in surveying existing practices in both experiential education and its assessment, it was clear that a number of interacting needs should be served if a Faculty Development Program were to be adequate. First, although a notable increase had been occurring in off-campus educational programs and in the granting of credits or advanced standing for learning derived from prior experience, there appeared to be neither consensus in higher education as to the rationale for these practices nor adequate clarity as to the rationale for divergencies of policy among institutions. Since faculty are autonomous professionals, it would be neither right nor effective to address them in a faculty development program as if they were to be indoctrinated or given directives as to how or what they should teach and how they should assess and credential the results. On this matter of rationales for different choices of program and policy, we could presume that different faculties would arrive at different choices. Hence, the rationales for different choices would need to be addressed and clarified as a prerequisite to effective use of experiential learning or properly focused assessment of its outcomes.

Second, even where a clear rationale existed for the conduct and crediting of experiential learning, there were rarely well-defined policies to govern these activities. Even faculty eager to get on with such programs would prefer not to do so until they could weigh the experience of others with different policies. If that experience had produced any distillate of standards of good practice, faculty would want to know about these as a prerequisite to designing their own policies and procedures.

Third, there was known to be a widespread concern as to whether or how valid and reliable assessment of the results of experiential education could be obtained and how these results might be articulated with the prevailing concepts as to what is creditable college or graduate work. With many faculty, in fact, the hesitancy to accept new forms of off-campus learning or infusions of the experiential into campus-based instruction is connected with doubts as to whether reliable evidence of learning in these ways can be obtained and documented, or would be found to pertain to objectives suitable for the award of college credit. A suitable faculty development program would have to address these technical problems of assessment and credentialing and the philosophic issues as to the meaning of college credit and degrees.

A sound program of faculty development would accompany information building with opportunities to think on the problems of concept and commitment; and both of these tasks would proceed in the context of skill building for the performance of those teaching and evaluation tasks that the faculty would determine to be most appropriate to their professional development.

In addition to the substantive needs for such a program, there were strategic and practical problems to be addressed. The program would begin with a substantial literature, some of it being the theoretical papers generated by CAEL and its *Handbooks* and *Guides* for faculty and students. But the program would have to create supplemental training exercises and instructional materials. Also there was not an available faculty to conduct this training for a sufficiently large number of

people; so the program would need to develop an initial corps of trainers, who would then conduct the training of a much enlarged group of faculty in a second phase of the program.

The Plan of the Program

In January of 1975 CAEL requested the support of the Lilly Endowment for a 20-month period to initiate the Faculty Development Program. The Endowment's grant was supplemented by income from fees paid by the participants or their institutions and by contributions in cash or in kind through which the individuals or, more commonly, their sponsoring institutions met the costs of released time, travel, and other costs.

The basic initial plan for the Program was that it consist of two phases, a first phase to train 10 to 12 two-person teams, who would, in turn, conduct the second phase of the Program, and a second phase in which some 250 persons would be trained in a set of 10 to 12 workshops offered in different regions of the country. These 250 persons would, upon completion of the Program, be prepared to provide technical assistance or to take leadership roles in their own institutions in the development and conduct of experiential learning programs and in the assessment of their outcomes.

The Program was to have these characteristics:

- It addressed both technical and attitudinal (philosophical, policy, and political) matters.
- It trained its own trainers, who were to pass the training along, thus setting in motion a ripple effect in dissemination of the learning.
- It exemplified its own principles by building into its learning design a substantial use of on-the-job application of the ideas and practices learned, of simulation of problems and problem-solving, and of creating and testing its own training materials.
- It included early surveys by the participants of faculty attitudes and institutional circumstances that limit acceptance of experiential learning and condition its effectiveness.
- It made heavy use of CAEL materials that were under development and contributed further data on the strengths and weaknesses of experiential learning programs and different methods of assessment.
- It developed new training materials for its own use and for later use in faculty development on its trainees' home campuses.

Because of the extra burden upon the first year's trainees of developing training materials and of learning how to train others, they were to meet in three workshops of two to two-and-a-half days each; the training in the second phase involved only two workshops of two days each. The overall plan is illustrated in Figure 10.

THE CONDUCT OF THE PROGRAM

The Faculty Development Program was announced in early summer 1975, and all member institutions of the CAEL Assembly were invited to apply. In late summer a

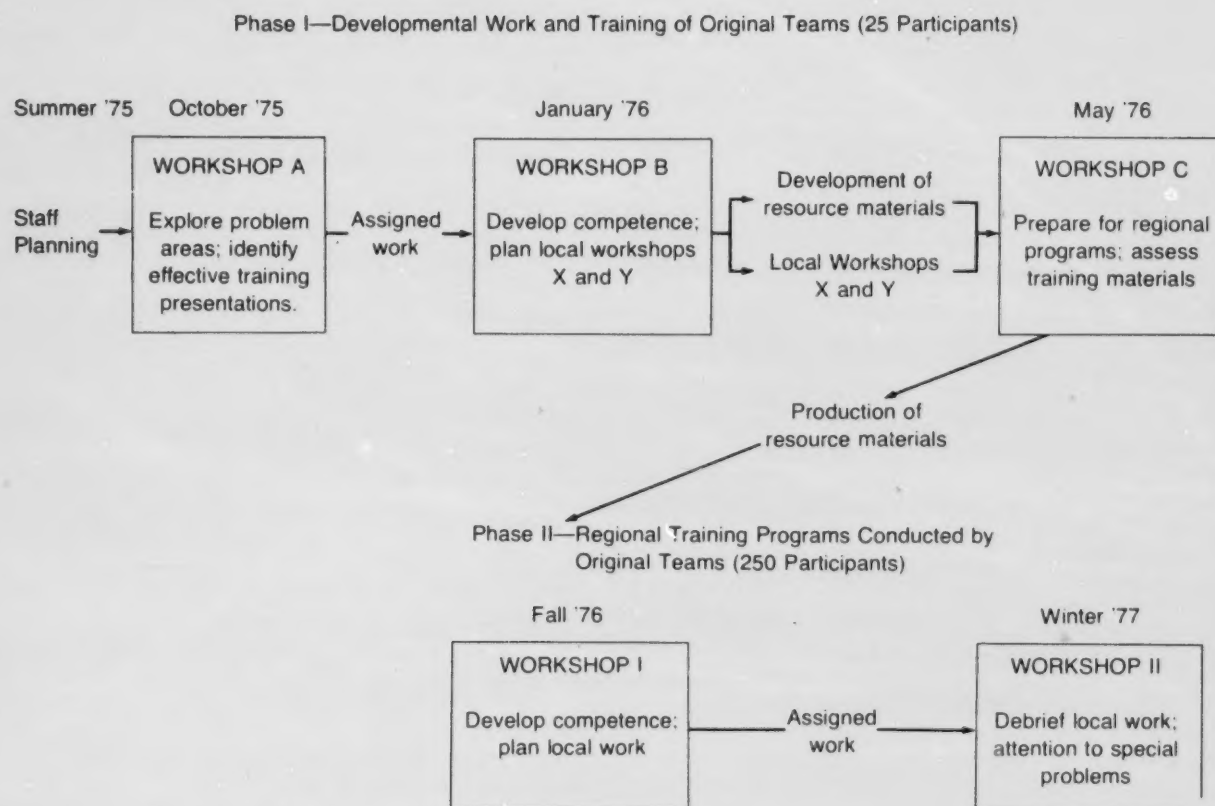


Figure 10. General plan of the Faculty Development Program.

specially appointed external committee (Leland Medsker, William O'Connell, and Patricia Thrash) selected 12 faculty teams who met the conditions for participation. The individuals are listed in Appendix B; their institutions were:

Alverno College
Governors State University
Hartwick College
Michigan State University
Metropolitan State University
Mount Union College
North Carolina Agricultural and Technical State University
Staten Island Community College
Temple University
The University of Akron
University of Evansville
University of Oregon

Also during the summer, the staff completed plans for the first workshop. It was decided that faculty teams should come to Workshop A with three kinds of information:

1. A written summary in the form of an informal reading of campus concerns and attitudes relative to experiential learning.
2. A rough plan that would describe how they might design and conduct a faculty workshop on experiential learning on their campus.
3. A brief self-assessment which would be a description and diagnosis of the participant's needs, strengths, and weaknesses in terms of assessing experiential learning and leading a faculty development effort.

Workshop A was held in Philadelphia in October 1975 in conjunction with the CAEL Assembly meeting. The purposes of Workshop A were to:

1. Explore attitudes that contribute to faculty resistance to, or acceptance of, experiential learning recognition and assessment.
2. Explore a sample of technical procedures that assure effective assessment.
3. Identify problem areas in (1) and (2) and relate them to faculty development.
4. Devise effective techniques and presentations that would promote faculty development in attitudinal and technical aspects of experiential learning assessment.

In addition, Workshop A was to provide the program staff with the opportunity to give program faculty an overview of the program and to engage them in planning the year's work.

This Workshop began with a consideration of the rationale for experiential learning programs and for this faculty development program. It then proceeded immediately with four concurrent simulation sessions in which two actual cases of student claims for credit for experiential learning (one for prior learning and one for sponsored learning) were reenacted. In debriefing from these simulations, there

was a listing of both attitudinal and technical assessment problems and proposed solutions for them. Videotape and audiotape playback were used to facilitate reflection upon these simulations. (This practice was continued in Workshops B and C.)

The Workshop agenda continued with two further simulations, each enacting an imaginary university committee meeting to consider a recommended policy regarding the crediting of experiential learning. These exercises were also used to identify issues of both policy and technical nature, which enter into such decision making.

All trainees had come to Workshop A with ideas as to how they themselves might design and conduct a faculty workshop as part of the practicum of the Program. One of the sessions of the Workshop was used for groups of four trainees to work together on the airing, critiquing, and revising of these ideas and plans.

In this, as in subsequent Workshops, a participant observer was invited to serve as evaluator and to report as a culminating element of the Workshop. Trainees were also invited to provide critical feedback later. Patricia Thrash served as a participant observer in Workshop A, John Jacobson in Workshop B, and Thomas Clark in Workshop C.

Following the Philadelphia workshop, each team returned to its own campus to work on the following assignments in anticipation of Workshop B:

1. An account of their involvement with a faculty member with an actual experiential learning assessment case.
2. The development of a strategy that could be used on their own campus to promote the adoption of an experiential learning program.
3. The compilation of a list of citations and annotations for a bibliography.
4. The creation of a team presentation on one technical problem concerning experiential learning assessment (twelve presentation topics were the results of participants' experiences in Workshop A).
5. The development of plans for workshops at their own institution (Workshop X) or a neighboring institution (Workshop Y). These were to be trial runs in anticipation of regional workshops.

Workshop B was scheduled for January 1976 in Chicago. The major objectives of Workshop B were to:

1. Develop and refine competence in solving technical problems inherent in experiential learning assessment.
2. Develop plans for Workshops X or Y.
3. Plan Workshop C (the participants' last training experience) and Workshops I and II (regional workshops in the second phase of the Program).

Workshop B was the longest and most intensive of the initial year's workshops: a two-and-a-half day period heavy with tasks. There was a major presentation, followed by discussion and practice sessions, on key issues and principles concerning reliability and validity in the assessment of experiential learning. This work was followed by a day of practice with learning modules developed by the trainee teams on twelve selected technical problems. These included such topics

as those of site supervision in sponsored learning away from campus, portfolio development, determining the amount of credit awards, preparing students for field study, eliciting and clarifying learning goals, developing sound appeal procedures regarding assessment decisions, the assessment of interpersonal skills, and problems of performance testing.

Workshop B put its second major emphasis upon the presentation and critiquing of the trainees' plans for Workshops X and Y, which would be their opportunity to try out what had been learned thus far in the Program. There were additional volunteered "sidewalk seminars" on technical problems during one of the workshop evenings; and a morning was devoted largely to a look ahead to plans for the final workshop for the first trainees and to the development of the Program for the second phase for 1976-1977.

Between Workshop B and C, participants conducted local workshops (Workshops X and Y) to get "hands-on" experience in planning and leading a workshop activity on the assessment of experiential learning.

The functions of Workshop C, which brought the initial training of the first round of trainees to a close, were those of (a) rounding out the preparation of the trainees to conduct workshops on experiential learning and its assessment, (b) tackling a last technical problem of knowing the costs of assessment and weighing cost effectiveness of experiential learning programs, (c) assessing training materials prepared for the second phase of the Program, and (d) identifying further preparatory work needed for the 10 to 12 sets of 1976-1977 workshops (to be called Workshops I and II).

The agenda of Workshop C provided for previewing of slide-tape presentations, practice with training modules on the use of needs assessments as a basis for workshop planning, critiquing of Workshops X and Y and debriefing on these experiences for insights usable in Workshops I and II, review of theory and practice on the evaluation of a workshop experience, training in identifying the costs of the assessment of experiential learning, and planning for Workshops I and II.

During the summer of 1976 the numerous training materials developed during the preceding 12 months were screened, edited, assembled, and produced in a looseleaf book called the *CAEL Faculty Development Resource Book* (37). The users of the book during the second phase of the program have been asked to make further contributions toward its next edition, including both improvements upon the present modules and contributions of entirely new modules.

The second phase of the Faculty Development Program is nearing its halfway point as this report is being written. Thirteen workshops (one more than the maximum planned) are underway. Participants come from 34 states or governmental jurisdictions, including Canada and Puerto Rico.

Several aspects of the planning for the second phase had to be altered. First, it was initially envisaged that the trainers for each site would be a pair from the same institution who had functioned as Team Leader and Associate during the first phase of the Program. However, in order to match the special competences of the trainers to the needs of specific workshops, the Program Staff in most cases formed new teams drawing trainers from two different institutions. This arrangement had the further advantage of diversifying the grasp of programs and institutions which the team knew firsthand.

Second, in a number of instances a consortium or a system desired a workshop exclusively for faculty from its own member institutions, and in other cases a

more loosely associated group of institutions or individuals took a major initiative in organizing and providing hospitality for a workshop. These arrangements seemed to the staff to present opportunities for more productive training and follow-up than might otherwise have been possible and were therefore welcomed.

Third, it was initially thought that to participate an institution would send at least two trainees. In a number of cases where the need and interest were strong, the institution could not meet this requirement and was permitted to send a single trainee and to make special arrangements for support for that person in bringing the workshop results back to the campus.

Finally, we had not initially contemplated workshops at such distant locations as Hawaii, but it was, of course, more economical to send a pair of trainers to Hawaii than to transport twenty trainees from there to California, especially since a renegotiation of fees and in-kind inputs made a workshop feasible for CAEL within the means initially contemplated. This example taught us that, in other cases as well, an institution or a set of institutions can make its appropriate contribution to costs only if we could provide a way for that to be done that differed from our original plans.

OVERVIEW OF THE 1976-1977 PROGRAM

The Faculty Development Program is a graduate program of doctoral or postdoctoral level in the design, conduct, and assessment of experiential learning.

Why Is This Program Important?

America is rapidly becoming a learning society in which people recurrently seek to increase their competences and enrich their lives by further learning. In such a society it is crucial to avoid waste from unnecessary repetition of what is already mastered, to provide educational options suited to the needs, abilities, and circumstances of the learner, and to make the learning efficient and affordable. If quality of education is to be assured in a society providing such options, there must be a large company of faculty and administrators competent to design and conduct these programs and to assess their outcomes.

For the institution sending its faculty and administrators for CAEL training, the most pressing concerns being met are those of assurance of quality and institutional survival. The rapid development of off-campus options for learning has brought home the urgency of making sure of both good program design and good outcome assessment. For some institutions there is the added concern that they can only sustain an adequate enrollment if they become competent in the provision of off-campus options, both for younger students demanding experientially infused learning options and for older students whose previous and ongoing experiences should be drawn upon in a sound way.

What Is the Value of the Program to the Trainee?

The typical participant is a faculty member (60 percent) or an administrator (22 percent) or both (17 percent) in an institution of higher education who already has a Master's or Doctor's degree. Many of the trainees combine teaching and adminis-

trative roles in innovative programs of their institutions. The typical trainee is also participating with the blessing of his/her academic vice president and with a priority assignment related to program development in the institution.

The program normally requires 40 to 60 hours of workshop meetings. The trainee will also spend the equivalent of four weeks preparing assignments, reading, consulting, carrying out a practicum-like project, and working inside the home institution to implement ideas developed in the CAEL program.

The usual training group in this program consists of 20 trainees, two trainers, and a Program Faculty member. Preliminary reading and analysis of needs will have been done, and the ensuing process covers four to seven months, involving assigned work before and after each workshop. Evaluation during the program for purposes of adjusting plans to trainees' needs is supplemented by evaluation of the elements of the program for the purpose of improving future CAEL training.

The outcomes of participation for the trainee are: (a) knowledge of the current state of the art of assessment of learning outcomes of both prior learning off campus and institutionally sponsored experiential learning; (b) knowledge of alternative approaches to the design and conduct of programs intended to optimize the mix between theoretic and experiential elements in learning; (c) knowledge of the resources (literature, people) on both design and conduct of experiential learning programs and in the assessment of their learning outcomes; (d) greater competence in the design and conduct of such programs and in assessing or obtaining competent assessment of their outcomes; and (e) competence in the training of others in these matters. Particular trainees are further encouraged to define objectives unique to themselves and important to their sponsoring institutions (for example, in achieving greater cost effectiveness in their programs).

The individual trainee gains a new level of competence and expertness in the matters just mentioned; the trainee may also aspire to become a CAEL-certified trainer or consultant. The trainee typically assumes a larger responsibility in the home institution after training and may be assisted in career advancement through the recognition resulting from CAEL training.

General Evaluation

Although evaluation is still incomplete on the initial workshops of the academic year 1976-1977, some findings appear to typify them. First, by contrast with the trainees of 1975-1976 who came with a primary interest in becoming trainers, those of 1976-1977 come more typically with definite institutional agendas to further. Such an agenda may be that of devising a cost-effective way of introducing a prior learning assessment program, or that of recommending a process and policies for the supervision of a field experience option with assessment of academically creditable learning. This agenda may or may not put a major emphasis upon training other faculty at the home campus in a workshop-like process, but invariably involves considerable responsibility for seeing that the yield of Workshops I and II is shared and exploited on the home campus.

Second, the *CAEL Faculty Development Resource Book* (37) has provided a tremendous technical boost to the learning effort. Numerous requests have been received for permission to duplicate portions of the book for distribution to all faculty or to training groups or policy committees.

Third, in each of the second phase workshops there are some very able trainees who are interested in serving as trainers outside of their home institutions and who impress the training teams as highly promising prospects for that work.

Fourth, the training materials and the other CAEL publications, which have appeared since fall 1975, have made it possible in this year's initial workshops to proceed further with the technical problems of assessment and assessment policy than was possible a year ago.

Fifth, it is evident that this effort is responsive to a widely felt need in higher education. CAEL has a pending backlog of requests for training from state education agencies, from consortia of institutions of higher education, from individual campuses, and from individuals. This pool of already available applicants is about 200 people from at least 10 prospective host institutions and over 80 participant institutions.

CAEL seeks to infuse American higher education with a new level of sophistication and expertness in experiential learning and its assessment. To this end we aim to prepare 400 or more faculty and administrators per year for such work and to develop 50 or more among them each year who can lead further training efforts. Since the state of the art is far from fully developed, CAEL will continue to foster research, to develop better resource materials, and to train people.

VII. Summary And Overview

In this final chapter it is not possible to discuss particular results of a project as extensive as CAEL. For that, the reader must refer to the preceding chapters and to the CAEL publications cited. But after this sizable undertaking it is reasonable to ask: Did the project achieve its objectives? What conclusions are suggested? What needs are unmet? In order to consider these questions, the following pages outline briefly the major outcomes of CAEL I. The chapter closes with conclusions concerning the broad input of the project and some significant implications they suggest for CAEL II and for higher education generally.

MAJOR OUTCOMES OF CAEL I

Early in 1974 the CAEL project set out to describe the state of the art in the assessment of experiential learning, to develop and validate new assessment methods and materials, to disseminate its products widely, and to facilitate their effective utilization. This three-year effort included a large number of interrelated projects and activities. More than 100 individuals were heavily involved in carrying out the work; probably several thousand have had some direct connection with CAEL through responding to surveys, participating in research, attending meetings, or through other project activities.

How does one account for the outcomes of this broad effort? One way is to ask what resources have been created that did not previously exist. Four types of resources can be cited: product resources, educational and technical resources, professional resources, and associational resources.

Product Resources. In addition to disseminating technical resource information and its own developmental work, CAEL placed high priority on putting forward many examples of good assessment practice in order to illustrate alternate approaches to the application of sound principles. Not counting working versions later replaced with final reports, CAEL produced 42 publications* and related products from spring 1974 through spring 1977:

- **8 Handbooks and Guides** for faculty and students describing particular types of assessment (48-55).
- **6 reference publications** providing detailed results of CAEL research and extensive resource material collected or commissioned by CAEL, including a series of papers on critical issues (13, 22, 27, 45, 56, 57).
- **12 institutional reports** describing different types of local assessment programs and how they operate (15, 18, 19, 28-34, 46, 47).
- **10 tape/slide presentations** and related resource materials for special use in classes, workshops, and other training activities (20, 21, 35, 37-43).

*References are to items annotated and indexed in Appendix A. The first three groups listed (26 items) represent publications currently available for purchase at this writing. The last two groups of 15 items were prepared for limited distribution or special activities of the project.

- **5 project reports** summarizing and documenting various aspects of the project for special distribution or for a limited period (1, 2, 3, 36, 44, 58).

Educational and Technical Resources. The product resources listed above engage a wide variety of assessment problems, provide different types of specialized information, and offer a great deal of useful assistance to the practitioner—all of which may be viewed as the educational and technical resources developed through CAEL. Those resources reside partly in the reports themselves (see Appendix A for contents of individual reports) and partly in the enhanced expertise and awareness of the very large number of people who have participated in CAEL activities. These educational and technical resources represent the intellectual outcomes of CAEL—some theoretical, most quite practical. They include the following:

- **Analysis of issues:** the history and rationale of experiential learning, social and philosophical issues, the role of credentials, the role of assessment in fostering individual development, principles underlying sound assessment.
- **Assessment techniques:** detailed descriptions of particular methods, special attention to alternatives, emphasis on assessment of prior learning and field experience, use of expert judgment, assessors and their qualifications, basic requirements of good practice.
- **Resource materials:** prototype forms and documents, checklists and sources, case studies, role-playing exercises, descriptions of institutions and programs, annotations of useful literature.
- **Analysis of special problems:** cost effectiveness of assessment, grading and standard setting, faculty attitudes concerning experiential learning, particular types of learning—especially work competence and interpersonal skill.
- **Institutional models:** models of faculty development, student guidance, change strategies, program financing, program implementation, and administrative operation.
- **Research foundation:** normative information on the validity and reliability of assessing experiential learning, strengths and weaknesses of particular methods, identification of ways to improve assessment, methods of quality assurance.

Professional Resources. One important CAEL objective was to involve in its work a large number of institutions and individuals. This was partly to insure that a wide spectrum of views was represented, but also to maximize the growth of professional expertise. This professional resource development was a major outcome of the CAEL project during its first three years. CAEL followed a strategy of encouraging intensive involvement of several people from each institution participating in a CAEL activity. In this way cells of expertise and sophistication were developed through mutual education and assistance. Through these key teams at many institutions, a widening circle of professional development was set in motion. Principal types of institutional involvement included the following:

- 22 institutions involved in the development of *Handbooks and Guides* and other special projects.
- 12 institutions involved in the development of operational models and in organizing workshops for individuals interested in the problems of implementing assessment programs.
- 16 institutions involved in the CAEL Faculty Development Program and in organizing workshops for an additional 130 institutional teams concerned with faculty development.
- 24 institutions involved as field sites for CAEL research and active participants in a series of studies.
- 21 institutions involved in the governance and policy direction of CAEL through service on the Executive and/or Steering Committees.

Associational Resources. Developed techniques, materials, and personnel resources are essential but not necessarily sufficient for effective work on a complex problem that involves large numbers of people spread throughout the country. Another necessary ingredient is the associational glue that facilitates communication, fosters cooperative work, and encourages initiative and a high standard of performance. There are several needs: opportunities for affiliation, mechanisms for marshalling energy behind important problems, and the structures necessary to carry out large projects. CAEL developed such associational resources through:

- A national Assembly for discussion of new work and debate on significant issues.
- Numerous workshops and local networks that facilitate intensive attention to problems of mutual interest.
- Clearinghouse services that provide a well-informed source of immediate information or reference.
- A cooperative framework for research and development including several proven models of participation.
- A growing and broadly based independent organization that can assume direct responsibility for initiating and administering projects of national scope and significance.

SOME CONCLUSIONS AND IMPLICATIONS

Generalizing about the results of any large research and development project is always difficult, but it is especially hazardous in this case because of the diverse nature of the problem. There are many different types of experiential learning and, correspondingly, many different types of assessment. Assessing prior learning has some very different implications from assessing field experience or assessing on-campus experiential learning in a competence-based program. Also, the assessment process must vary somewhat from situation to situation depending upon local circumstances. Since there are no two or three standard methods that can be evaluated once and for all, generalizations about the assessment of experiential learning have to take that variety into account and have to be based largely upon the general approach to assessment that has characterized most of CAEL's work.

That general approach recognized six basic steps in assessment (see page 22). Much of CAEL's work has been concerned with developing and evaluating improved methods for dealing with one or more of those steps in assessing some particular type of learning. The questions are how does the process seem generally to work and what of significance has been learned?

Several general conclusions seem warranted; each suggests implications. The conclusions and the implications offered in the next few pages are based upon the overall experience of the project—the developmental work, discussions among practitioners, field research, and personal judgment.

First, it can be concluded that the cooperative developmental model worked; the project achieved all of its principal goals. All major research and development activities were completed, training and dissemination objectives were realized, and the associational function of CAEL succeeded beyond any reasonable expectation. The success of the project is due to the hard work of many people, but the fact that the developmental model worked well seems especially associated with the institutional commitments—their willingness to join together, to share expertise, and to commit resources. Furthermore, the marriage of expertise in research and measurement with the expertise in educational programs and instruction paid all the dividends hoped for. These structural characteristics of the CAEL project during its developmental phase undoubtedly resulted in assessment methods that are more rigorous and also more faithful to the character and objectives of highly individualized learning than might otherwise have been the case.

A clear implication is that the momentum achieved should certainly be maintained. The problem of assessing experiential learning is by no means solved. CAEL focused upon certain issues to the acknowledged exclusion of others. It has dealt with limited assessment methods, limited arenas of learning, and limited types of learning outcomes. It is important that those boundaries be extended. Also CAEL has come to realize that sound assessment of experiential learning is very much a matter of developing sound learning programs, and CAEL interests have tended to move in that direction.

This broadened interest in educational programs seems a natural and appropriate development, but the emphasis on research and development is one aspect of momentum that should not be lost. CAEL has had signal success in attracting interest and involvement, and a significant part of that attraction is likely attributable to its research and development projects. Such activities not only contribute intellectual stimulation and help upgrade practices; they also provide critical mechanisms for active institutional participation. A continuing style of cooperative projects seems especially important. Because of CAEL's evolving interests and development as an association, ETS encouraged CAEL to become an independent organization, and CAEL concurred. It is a propitious development that the new CAEL is structured to facilitate cooperative projects among its member institutions and with other agencies as well.

Second, from the experience of this project it is reasonable to conclude that experiential learning can be assessed with acceptable rigor, though there are important qualifications to remember. There are very different types of assessment and these pose different problems, but in general, results of the

experimental tryout and the field research indicate that assessment problems are surmountable with proper attention.

In the experimental tryout, institutions found the methods and materials workable and generally useful. There were almost no fundamental redirections or serious questioning of basic assumptions underlying the assessment procedures suggested. That is, from the standpoint of student and faculty users, the assessment procedures made sense and were relevant to perceived needs. The field research indicated that faculty can agree reasonably well when appropriate conditions are met—and these are the important qualifications. It is necessary for institutions to develop clear policies and clear procedures for assessing experiential learning, and it is necessary for faculty to be experienced in such assessment. If any one of these conditions is not adequately met, results of this work suggest that the assessment process is likely to be poor, with resulting inequity to students. One especially encouraging aspect of CAEL research should be added. There was concrete evidence that good assessment can itself have direct educational benefit to the student.

The implication of CAEL's generally positive findings and experience is that there is every reason to foster experiential learning and to encourage continuing developmental work on new assessment procedures. At the same time, it is important to recognize that procedures can and should be strengthened, especially in institutions less experienced in such assessment and in less well-developed (and more controversial) areas like interpersonal competence and prior learning.

A further implication concerns the need for quality assurance in the assessment of experiential learning. A major CAEL objective has been to aid in the development of assessment methods that would serve the student's educational needs but also protect the student's interests by supporting strong standards in sound programs. That emphasis needs to be translated into local programs of quality assurance that include institutional guidelines of good practice and routine procedures for monitoring adequacy of assessment.

As a third conclusion, it is evident that experiential learning has great value and potential far beyond limited applications in "nontraditional" programs and institutions. Experience of the CAEL Project suggests that this value and potential lie partly in broader application of the concept of appropriate credit for relevant prior learning, and partly in more extensive use of experiential learning in all curricula. The great significance of systematic recognition of prior learning is the linkage it provides between formal education and adult life; that is, a mechanism for integrating education and work, for recognizing the validity of all learning that is relevant to a college degree, and for actively fostering recurrent education. CAEL advocates more extensive use of experiential learning in the traditional curriculum for two principal reasons: because experiential learning enhances the understanding and value of the more conceptual learning typically emphasized in the classroom, and because experiential learning places special emphasis upon the relationship between learning and personal goals and development.

The potential of experiential learning for a greater role in education has many implications, but even if its application increases only gradually, institutions must begin to deal more directly with the questions that such infusion raises. CAEL has made a start on some of the issues, especially in its work on operational models.

Cost-effectiveness is a major question in any program that emphasizes individualization and aspires to accommodate more than a few students. Another obviously important issue that has received only limited attention is the question of what effect a substantially increased emphasis upon experiential learning would have upon traditional academic structures and faculty. Finally, any significant shift of curriculum emphasis in the educational system is bound to create problems of transition and articulation among institutions and levels of education. All of these problems are exceedingly complex, but this is all the more reason for engaging them.

A reasonable fourth conclusion is that the educational rationale for experiential learning is still in a state of development. Despite general agreement concerning the validity of experiential learning and strong arguments for the educational value of specific aspects of such learning, there is little integrated theory that clearly defines the scope and character of experiential learning and its particular pedagogical functions in the curriculum. CAEL has made a significant contribution to such theory, but this is too complex an issue to be "settled" by a project, a conference, or a useful collection of papers and reports.

Concrete evidence of this conceptual complexity is available in the results of CAEL field research. Important underlying assumptions to a sound assessment procedure are faculty agreement on what college-level learning is and how that learning is related to a degree program. Research findings indicate that faculty within institutions often disagree on these issues; disagreements across institutions are much greater, and it seems doubtful that such institutional differences always reflect a well-articulated institutional rationale.

An obvious implication is the need for continued work on the conceptual foundation of experiential learning. A more fully developed theory of the distinct character of experiential learning and its unique potential for different types of learning objectives would be helpful, but there are more immediate and pragmatic needs. In an operating program a clear rationale demands that students and faculty have a clear understanding of what *criterion standards* are required; i.e., what specific types of learning or competence are relevant (what criterion) and what level of learning is expected (what standard)? Continued work on how to better define criterion standards for different types of learning would not only be immediately useful, but effective work on this problem would also help articulate the rationale of experiential learning.

A fifth conclusion is that problems of assessing experiential learning are basically similar to problems of assessment in higher education generally. Effective assessment of experiential learning requires some degree of sophistication in the techniques of assessment, in mentoring, and in marshalling learning resources. The desirability of these skills is certainly not unique to experiential learning, and they are sometimes viewed as areas of deficiency for many faculty. An added problem for many institutions is the fact that faculty interested in experiential learning have no ready means within their local institution or their own discipline to become familiar with the broad demands of dealing with highly diverse types of learning.

One clear implication is the need for expanded programs of professional

development. With greatly increased interest in experiential learning, large numbers of individuals need more knowledge and expertise in theory and in practice. These include faculty, staff, and mentors who work with students, and also other personnel in field sites, agencies, and educational systems who have substantial responsibility for supporting experiential learning programs. The greater number need immediate assistance in acquiring effective skills for working with students in experientially-based programs and in optimizing the mix of theoretic and experiential learning. Some need a higher level of understanding in order to train others. In anticipation of that need CAEL has already initiated plans to certify such experts.

A second implication of longer-range significance is the impact that this movement can have upon traditional educational practices. If these problems of designing effective learning experiences and carrying out equitable assessment of learning outcomes are ubiquitous problems of higher education generally, then the difficult tasks of rationalizing and objectifying experiential learning cannot help but have great benefit for all students and faculty.

As a final conclusion, it can be observed that there is widespread interest and strong support for experiential learning, but that this strength can be undercut unless potentially negative influences are recognized and effectively met. On the one hand, interest in experiential learning is spurred by a fundamental spirit of reform that seeks to improve the accessibility and the value of education to the student. Coincidentally, experiential learning is fueled by self-interest in some institutions in their search for programs that will attract new clientele in a time when some enrollments are shrinking. There are two countercurrents.

One is the threat of abuse of nontraditional practices in assessment and awarding credit, and the possibility that perfectly sound programs may be discredited as a result. That is not an idle danger even though current instances of abuse appear isolated. Another countercurrent is the "back to basics" movement, which is often perceived as a conservative swing of the pendulum and possibly unfriendly to anything not strictly traditional. The interest in basic competence is actually quite compatible with the goals of experiential learning; indeed it can be said that the pragmatic emphasis of experiential learning is very well suited to such educational objectives though they may well need more explicit attention than they have yet received.

These trends suggest several implications. There seems little reason to question the compatibility of the positive motives for experiential learning. Certainly the promise of more accessible and effective education can help institutions survive in a time of retrenchment; the tremendous potential of experiential learning should be utilized to its fullest extent. But it should be made very clear that experiential learning is a very demanding form of education and hardly an easy route to expanding the student body.

At this stage in the development of assessment practices and organizing new programs in experiential learning, it seems especially important to insist upon quality—quality in the basic skills that students are expected to learn, quality in assessment practices, and quality in the overall effectiveness of programs. The general problem of program evaluation deserves special attention. Accrediting agencies, graduate departments, and other interested third parties need good advice on what constitutes a sound program of experiential learning.

This special emphasis upon quality and accountability in experiential and off-campus learning suggests a double standard; most informed observers acknowledge that traditional programs often lack rigorous quality control, clarity of objectives, and evaluation of outcomes. To some extent a double standard may be inevitable for any new program to prove itself, but the desirable resolution is for higher expectations throughout higher education. Those forerunner institutions that deserve the credit for advancing experiential learning have a special responsibility for protecting the investment by insisting that all meet the standard of care they have demanded of themselves.

APPENDIX A. CAEL PUBLICATIONS AND PRODUCTS

From spring, 1974 through spring, 1977 CAEL produced 58 reports and related products. For record purposes this appendix lists all of those items in roughly the order in which they were produced. The list includes 16 starred (*) items that were superseded by revised reports. In such cases the item is listed only by title, and the reader is referred to the subsequent report that superseded it.

The remaining 42 items, all annotated briefly in the following pages, fall into these categories:

- A. 8 Handbooks and Guides (items 48-55)
- B. 6 Reference Publications (Items 13, 22, 27, 45, 56, 57)
- C. 12 Institutional Reports (Items 15, 18, 19, 28-34, 46, 47)
- D. 10 Tape/Slides and Resource Materials (Items 20, 21, 35, 37-43)
- E. 5 Project Reports (Items 1, 2, 3, 36, 44, 58)

Those 26 items in categories A, B, and C constitute the primary body of assessment reports and materials currently available from CAEL at this writing. The annotations indicate generally what each of these publications is about, but the volume of material is not easy to handle. In order to help readers locate items of special interest, a highly condensed topical index is provided on pp. 66-67.

The last two categories (D and E) include items that were developed for use only in a particular activity (e.g., Faculty Development activities sponsored by CAEL) or in a limited time period. With the exception of the Newsletter (1), the Directory (58), and a few out-of-print items, all items listed under D and E are designated for limited distribution.

1. CAEL Newsletter

The CAEL Newsletter is a 6-12 page periodical that has appeared two or three times annually since the beginning of the project. Its primary purpose has been to announce and describe CAEL activities to a substantial number of interested people who have requested that they be kept informed about the progress of the project. The Newsletter also annotates publications of interest, describes some related events concerning experiential learning, and provides special reports on selected institutional programs.

2. CAEL Resource Book. 1974. (Out of Print)

The CAEL Resource Book was a binder designed to house various items distributed during the first year of the project. It included annotated bibliographies, institutional annotations, agency annotations, a CAEL Assembly Directory, and condensed versions of the special project reports. Parts of this material became out of date by the time of this writing; other parts have been incorporated in subsequent publications (15, 18, 19, 46, 47, 56, 58).

3. Current Practices in the Assessment of Experiential Learning. CAEL Working Paper No. 1, 1974. Warren Willingham, Richard Burns, and Thomas Donlon. (Out of Print)

In the spring of 1974 CAEL undertook an extensive survey of experiential learning programs and assessment practices. It involved a mail questionnaire and a number of site visits. This report on assessment practices provides a general overview of institutional programs and assessment practices as of the beginning of the CAEL project. It identified a number of problems and needs which were useful in determining CAEL work priorities.

Topical Index to CAEL Publications*

Topic	Handbooks & Guides	Reference Publications	Institutional Reports
<i>General References</i>			
History of experiential learning		22b; 57; 39**	
Rationale and issues	52	22d, e, f, m; 37; **57	29; 31; 32; 34d; 46
Educational credentials		22a, c, j	
Annotated literature		13; 27; 56	
Programs and learning arenas	52; 55	22g, h	
<i>Six Steps in Assessment</i>			
Identify or plan learning	48; 49; 50; 52 53; 54; 55	22m; 41** 45c	47
Articulate with goals or degree	48; 49; 53; 54; 55	45b, d	
Document learning outcomes	49; 54	45c	47
Measure learning acquired	49; 51	13; 27; 45	
Evaluate against credit standard	49	27	29; 32
Transcribe credit		22k	
<i>Types of Assessment</i>			
Assessment interviews	48; 51	13; 42** 45b	
Rating methods	50; 51	45a	
Simulation and role playing		45b; 37**	
Product and performance evaluation	51	45e	
Objective tests			34a

*Does not include any CAEL publications listed here as out-of-print or superseded by later reports.

**Available only through CAEL Professional Development Programs.

Topic	Handbooks & Guides	Reference Publications	Institutional Reports
<u><i>The Assessment Process</i></u>		22k	
Assessment principles	51	22k, m; 45	
Use of expert judgment	51	221	29
Reliability, validity, and quality assurance	51	45a; 57	
Value for student development	48; 53; 54 55	45c	
<u><i>Types of Competences</i></u>			
Interpersonal skill	48; 53	45b	46
Occupational competence	50	45d	18
General work competence	55		31
Communication		45e	
Values and personal development		22f	34d
<u><i>Institutional Programs</i></u>			
Field experience	52; 55		18; 34c; 47
Prior learning	49; 54	45c	19; 30; 31; 33; 34b
Work experience	50		
Competence-based		45e	32
Integrating experiential learning into the curriculum	52		34c, d; 46
<u><i>Program Administration</i></u>			
Cost-effectiveness		27	22i; 30; 33
Faculty development		57; 37**	15
Implementing programs	49; 52	27; 57	19; 34
Institutional policies and practices			15; 28; 34b
System coordination			28; 34a

- *4. *A Compendium of Assessment Techniques*. Joan Knapp and Amiel T. Sharon. CAEL Working Paper No. 2, 1975. (Superseded by item 13 annotated below.)
- *5. *Reflections on Experiential Learning and Its Uses*. Edited by Morris Keeton. CAEL Working Paper No. 3, 1974. (Superseded by item 22 annotated below.)
- *6. *The Learning and Assessment of Interpersonal Skills: Guidelines for Administrators and Faculty*. Paul Breen, Thomas F. Donlon, and Urban Whitaker. CAEL Working Paper No. 4, 1975. (Superseded by item 48.)
- *7. *The Learning and Assessment of Interpersonal Skills: Guidelines for Students*. Paul Breen, Thomas F. Donlon, and Urban Whitaker. CAEL Working Paper No. 5, 1975. (Superseded by item 53.)
- *8. *A Guide for Assessing Prior Experience Through Portfolios*. Joan Knapp. CAEL Working Paper No. 6, 1975. (Superseded by item 49.)
- *9. *A Student Handbook for Preparing a Portfolio for the Assessment of Prior Experiential Learning*. Aubrey Forrest. CAEL Working Paper No. 7, 1975. (Superseded by item 54.)
- *10. *A Task-Based Model for Assessing Work Experience*. Amiel T. Sharon. CAEL Working Paper No. 8, 1975. (Superseded by item 50.)
- *11. *A Student Guide to Learning Through College-Sponsored Work Experience*. Hadley Nesbitt. CAEL Working Paper No. 9, 1975. (Superseded by item 55.)
- *12. *The Use of Expert Judgment in the Assessment of Experiential Learning*. Richard Reilly, Ruth Churchill, John Clark, Arnold Fletcher, Myrna Miller, Judith Pendergrass, Jane Porter. CAEL Working Paper No. 10, 1975. (Superseded by item 51.)
13. *A Compendium of Assessment Techniques*. Joan Knapp and Amiel T. Sharon, 1975.

There are a wide variety of different assessment techniques that might be appropriate to different types of experiential learning. This monograph includes sections on performance tests, simulations, interviews, ratings, product assessment, etc. Each section orients the reader to one of these general types of assessment and then provides brief illustrations of different applications. This overview cites a number of references that provide more detailed information concerning each assessment method.
- *14. *CAEL Project Status Report: December, 1974*. Warren W. Willingham. (Superseded by item 57.)
15. *The Use of Expert Judgment in the Assessment of Demonstrated Learning in the Antioch College Yellow Springs Adult Degree Completion Program*. Robert Lewis. CAEL Institutional Report No. 1 from Antioch College, 1975.

The unique aspect of this report is its detailed recording of the various issues, questions, and problems that arise when a group of faculty relatively inexperienced in assessing experiential learning meet together for intensive discussion with more experienced faculty concerning institutional policies and practices in assessing prior learning. For that reason, the report is a useful reference for any

institution wishing to introduce new faculty members to issues concerning assessment and credentials that deserve their attention.

- *16. *Interpersonal Learning in an Academic Setting: Theory and Practice*. Lois Lamdin and Miriam Tatzel (Empire State College). CAEL Institutional Report No. 2, 1975. (Superseded by item 46.)

- *17. *Evaluation and Expert Judgment*. Jane Permaul and Marina Miko (University of California at Los Angeles). CAEL Institutional Report No. 3, 1975. (Superseded by item 47.)

18. *The Refinement and Modification of an Instrument for Assessing the Achievement of Interpersonal Skills of Social Work Students*. Kurt Spitzer and Sue Smock. CAEL Institutional Report No. 4 from Wayne State University, 1975.

Students engage in many types of field experience learning in different types of settings and in different degree programs. This report is especially concerned with field experience related to social work, but the learning checklists involved a number of generic skills that apply to many types of field experience. There are 12 checklists for rating student learning. These fall into three areas: basic educational and performance skills, communication and observation skills, and problem-solving skills.

19. *Guidelines and Procedures for the Assessment of Experiential Learning and for the Selection and Training of Field Experts*. Frank Christensen. CAEL Institutional Report No. 5 from William Rainey Harper College, 1975.

Any college wishing to initiate a program of accepting and crediting nonsponsored experiential learning faces first a procedural problem of considering what type of program and procedures might be appropriate. This report discusses the steps through which William Rainey Harper moved in implementing such a program: setting up a local task force, use of consultants, site visits to other institutions, preparation of procedural documents, and so forth.

20. *Interpersonal Skills: An Analytical Framework* (Tape/Slide Presentation). Paul Breen and Urban Whitaker, San Francisco State University, 1975. (Out of Print)

This tape/slide presentation was designed for use either as an introduction to CAEL Assessment Reports concerning interpersonal skills or independently for classes and in-service programs in the human services or related areas. The material is especially pertinent to curriculum planning, faculty development programs, advising and counseling, career education, and as a background for the development of local assessment techniques.

21. *Interpersonal Literacy* (Tape/Slide Presentation). Paul Breen and Urban Whitaker, San Francisco State University, 1975. (Out of Print)

This presentation identifies and illustrates the role of sociocultural variables and affective qualities which influence choices of communicative behavior. The concept of interpersonal literacy is defined as "knowing when and how to communicate what to whom in order to achieve specified goals." The material was based upon CAEL publications 48 and 53. It was designed for use with faculty groups.

22. *Experiential Learning: Rationale, Characteristics, and Assessment*. Morris T. Keeton and Associates. San Francisco: Jossey-Bass, Inc., 1976.

During its first year the CAEL project commissioned a series of papers concerned

with the conceptual foundations and the practice of experiential learning and its assessment. The important series of papers is collected in this book which includes the following chapters:

- (a) Credentials for the Learning Society (Morris T. Keeton)
- (b) Deep Traditions of Experiential Learning (Cyril O. Houle)
- (c) Credentialing the Disenfranchised (Alan P. Gartner)
- (d) Valid and Invalid Rationales (Melvin Turmin)
- (e) Differences Between Experiential and Classroom Learning (James S. Coleman)
- (f) Developmental Change as a Major Outcome (Arthur W. Chickering)
- (g) Campus and Workplace as Arenas (Sheila C. Gordon)
- (h) Learning Through Work and Education (Paul E. Barton)
- (i) Cost-Effectiveness of Programs (George Weathersby and Armand J. Henault, Jr.)
- (j) Importance of Assessing Learning (Robert Kirkwood)
- (k) Tools and Methods of Evaluation (Aubrey Forrest, Joan E. Knapp, and Judith Pendergrass)
- (l) Assessors and Their Qualifications (Urban G. Whitaker)
- (m) Critical Issues and Basic Requirements for Assessment (Warren W. Willingham)

*23. *CAEL Progress Report for Field Research: March, 1976.* (Superseded by item 45.)

*24. *CAEL Progress Report for Faculty Development Program: April, 1976.* (Superseded by item 44.)

*25. *CAEL Progress Report for Operational Models Project: February, 1976.* (Superseded by item 36.)

*26. *CAEL Project Status Report: March, 1976.* Warren W. Willingham. (Superseded by item 57.)

27. *Implementing a Program for Assessing Experiential Learning.* Edited by Hadley S. Nesbitt and Warren W. Willingham. 1976.

This report contains selected material prepared by ETS staff members as background information for the Operational Models project. It gives a general overview of the main issues addressed in the project and provides reference information that can help other institutions work on an operational model. The report includes three papers: "Developing an Operational Model for Assessing Experiential Learning" by Warren W. Willingham and Kurt F. Geisinger; "Setting and Evaluating Criterion Standards" by John Fremer; and "Assessment and Accreditation: Economic Considerations" by Dean T. Jamison and Barbara Burgess Wolfe. A briefly annotated bibliography is included.

28. *Coordinating Educational Assessment Across College Centers.* Ruth Churchill, Andre Guerrero, Janet Hartle, and Harry Horwitz. A CAEL Institutional Report from Antioch College, 1976.

The authors report on an operational model developed as a result of a systematic analysis of three distinctly different Antioch centers. The model uses four major levels focusing on flow of influence: Level I—the rationale of Antioch College and the individual centers; Level II—programmatic matters bearing on curriculum, faculty, and students; Level III—student assessment based on criterion stan-

dards, appraisal of learning, and preparation for assessment; and Level IV—methods of translating experiential learning for nontraditional consumption, outlining credit policies and records of learning outcomes. The report discusses five major findings that have important implications for institutions using experiential learning as a core philosophy.

29. *Standard Setting by Students and Community—How Much is Enough?* Laurent Daloz. A CAEL Institutional Report from Community College of Vermont, 1976.

This report extends the position that the highest purpose of education is to foster both community and individual self-reliance. It describes the process and materials developed to help students and local review committees agree on standards that are unique to student goals, that accurately reflect community expectations, and that conform to the institution's educational principles. It lists the steps through which student and committee go in the degree development sequence.

30. *Implementing and Financing Portfolio Assessment in a Public Institution.* Eugene Kray and Lorraine Hultgren. A CAEL Institutional Report from Delaware County Community College, 1976.

The authors first describe the formation, organization, philosophy, and structure of DCCC's program for assessing prior experiential learning. The heart of the report presents a financial model in which (1) all parties—student, state, and local sponsor—share in the cost of assessment in the same proportions as they do for the traditional programs of the college; (2) faculty are compensated for their time on a contact hour basis according to the number of credits sought by the student—not the number of credits awarded; and (3) the cost of assessment is shown to be approximately one-fourth the cost of traditional course work. This model should be of general interest to both two-year and four-year public colleges.

31. *Implementing Competency-Based Assessment of Prior Learning.* Nancy Wylie. A CAEL Institutional Report from Florida International University, 1976.

This report describes the development, trial use, and revision of a competence-based tool for assessing prior learning—The Prior Experiential Learning Evaluation Packet. The author explains the integration of the new assessment process within an existing external degree program; describes how the external degree program and its students interact with other administrative and academic units of the University; and discusses *explicit* and *implicit* standards and their implications for assessment in a context in which the responsibility for assessment is partially decentralized.

32. *An Individualized Competence-Based Assessment Model.* Annie Belle Calhoun, James E. Deegan, Leah Harvey, and Charles Libera. A CAEL Institutional Report from Metropolitan State University, 1976.

Metropolitan State University is an upper-division, competence-based, baccalaureate-degree-granting institution created in 1971 to serve adults. This operational model focuses on topics such as criterion standards within the context of an individualized, student-centered, competence-based program; the use of external or community-based persons as expert judges of students' competences; the functions and activities of assessment faculty; the strengths and weaknesses of the narrative transcript; and the effectiveness of the University's assessment policies, procedures, and materials.

33. *Analyzing Costs in the Assessment of Prior Learning*. R. Lynn Kelley, Terrence J. MacTaggart, and Robert Spencer. A CAEL Institutional Report from Webster College, 1976.

This report describes the preparation for and the results of a cost analysis of the assessment of prior learning in two programs. It concludes that total assessment costs are significantly less than costs for conventional classroom instruction, that unit costs diminish as the volume of assessment increases, and that the evaluation of the relative benefits of assessment programs should be made within the context of long-range institutional objectives. This model will probably be most useful to private institutions that are faced with changing clientele and have the capacity to attract older students.

34. *Initiating Experiential Learning Programs: Four Case Studies*. A compilation of four Institutional Reports. The Consortium of the California State University and Colleges, Memphis State University, Union College, and University of Kentucky. 1976.

These four reports all deal with programs that are in some sense in an early stage of development. The report by Barrie Bortnick (Consortium of the California State University and Colleges) (a) describes the efforts of a traditional decentralized system to introduce flexibility in the use of challenge examinations for crediting prior learning. Richard Ranta's report (Memphis State University) (b) describes how a large traditional state university dealt with the issues involved in specifying criteria for assessing experiential learning, acquainting faculty with the assessment process, and integrating those procedures into the university structure. The report by Dale Meyers and Joe Thomas (Union College) (c) describes the development of a central office for sponsored field experience learning in a liberal arts institution. The report by Barbara Hofer, Robert Sexton, and Ernest Yanarella (University of Kentucky) (d) provides a model for integrating experiential learning in the liberal arts, especially with respect to the curriculum's emphasis upon values and ethics.

35. *CAEL-eidoscope—An Educational Game*. Produced for CAEL by COMEX, University of California at Los Angeles, 1976. (Limited Distribution)

CAEL-eidoscope is an educational game that was produced under the auspices of the Operational Models project. The purpose of the game is to facilitate participants' discussion of the important issues concerning experiential learning. In so doing, it focuses upon policies and practices that are defended from different points of view.

36. *Final Report for CAEL Operational Models Project*. 1976. (Limited Distribution)

This report provides an overall description of one major activity of CAEL during 1975-76. It includes summaries of the various institutional projects, the full report of the Audit Committee, and brief descriptions of dissemination activities.

37. *CAEL Faculty Development Resource Book*. 1976. (Use Limited to Faculty Development Program)

This *Resource Book* is a looseleaf kit of aids designed to help participants learn how to accomplish three types of tasks: (1) to train others to do a better job of assessing experiential learning; (2) to assist others in designing and developing sound educational programs, using both theoretical and experiential components; and (3) to help other individuals become trainers in turn. The *Resource Book* contains role-playing exercises, case studies, and a variety of materials and

prototype documents helpful in familiarizing inexperienced faculty with the theory and practice of designing and assessing experiential learning.

The following six items are all tape/slide presentations produced for CAEL by Urban Whitaker and Paul Breen of San Francisco State University. At present they are used only in the CAEL Faculty Development Program. Each presentation takes 12-15 minutes. They are designed for flexible use by individuals or for groups involved in experiential learning workshops. While each may be used independently of the others and in any order, they are listed in descending order of generality. They are well adapted for use as introductions to work sessions and training programs.

38. *The CAEL Story*

39. *Experiential Learning: History and Rationale*

40. *The CAEL Faculty Development Program*

41. *Six Stages of Assessing Experiential Learning*

42. *Survey of Assessment Techniques*

43. *How to Run a Workshop*

44. *CAEL Faculty Development Final Report*. 1977. (Limited Distribution)

This final project report provides an overview of the Faculty Development Program, which was a major activity of CAEL during the 20-month period from July, 1975 to March, 1977. It documents the procedures of the project rather than the substantive output of the activity, which is represented in items 37 through 43.

45. *The CAEL Validation Report*. Warren W. Willingham and Associates. 1976.

The CAEL Validation Report provides detailed documentation of the experimental tryout of CAEL developmental products during 1975-76 and a series of 10 field studies involving 24 CAEL institutions. The report describes extensive findings that focus on the strengths and weaknesses of different assessment methods and the characteristics of assessment procedures that affect reliability, validity, and usefulness to students. It includes chapters on: (a) research and quality assurance, (b) findings concerning the assessment of interpersonal competence, (c) findings concerning the assessment of prior learning, (d) findings concerning assessment of occupational competences, and (e) illustrative institutional studies of the reliability of expert judgment. This report is a basic reference for institutions wishing to examine the consistency and equity of their own assessment procedures and the soundness of their underlying educational rationale.

46. *Prospects and Methods for Interpersonal Studies*. Miriam Tatzel. CAEL Institutional Report No. 2 from Empire State College (Revised Edition). 1977.

At Empire State College students work with a mentor to develop learning contracts. This institutional report shows how interpersonal learning is integrated into the formal educative process through the learning contract mode. The author describes a framework that takes into account cognition, affect, and behavior; that is, thought, feeling, and action.

47. *Documentation and Evaluation of Sponsored Experiential Learning*. Jane Szutu Par-

maul and Marina Bühler Miko. CAEL Institutional Report No. 3 from University of California at Los Angeles (Revised Edition). 1977.

A major problem in assessing off-campus experiential learning is the need to structure the learning process and document the learning outcomes. This report describes the procedure developed at UCLA that explicates the learning that is taking place and therefore helps to shape and improve subsequent learning experiences of the student. The method focuses upon a record-reflection log and an assessment matrix as tools for assessing sponsored learning. These devices emphasize the role of the student and local supervisors in evaluating and molding learning outcomes.

48. *Teaching and Assessing Interpersonal Competence—A CAEL Handbook*. Paul Breen, Thomas F. Donlon, Urban Whitaker. 1977.

It is increasingly recognized that interpersonal competence deserves a prominent place in many curricula because of the importance of interpersonal skill in applying theoretical learning in practical situations. This *Handbook* is intended to facilitate the teaching, learning, and assessment of college creditable interpersonal competence acquired in experiential situations. Procedures are suggested for identifying and categorizing interpersonal skills, articulating them to students' goals, discovering and utilizing potential experiential learning situations, and assessing the learning of interpersonal skills for academic credit. A core program of assessment strategies is outlined emphasizing the need for multiple techniques.

49. *Assessing Prior Learning—A CAEL Handbook*. Joan Knapp. 1977.

Different institutions assess and credit prior experience in different ways. One of CAEL's primary objectives is to develop sound general procedures for such assessment and to suggest alternate ways that important basic steps can be carried out. This *Handbook* is a good illustration of that developmental objective. It presents a model for portfolio assessment that incorporates eight stages: (1) facilitating the construction and assessment of a portfolio; (2) identifying significant prior experiences; (3) expressing the learning outcomes of prior experiences; (4) articulating prior outcomes to educational goals; (5) documenting the learning experience; (6) measuring the extent and level of prior learning outcomes; (7) judging the learning outcomes; and (8) evaluating prior learning outcomes for awarding credits or recognition. At each stage alternative practical procedures are suggested.

50. *Assessing Occupational Competences—A CAEL Handbook*. Amiel T. Sharon. 1977.

This *Handbook* describes a model for assessing specific competences acquired in work situations that are relevant to occupationally oriented degree programs. The model is designed to help a college specify the kinds of competences acquired in various occupational settings, to define the learning objectives of occupational and career programs, and to translate the competences into college credit where appropriate. The report describes the application of the model to three fields (data processing, law enforcement, and secretarial science) and shows how the model can be applied to other occupations. Prototype assessment instruments and procedures are included.

51. *Expert Assessment of Experiential Learning—A CAEL Handbook*. Richard Reilly, Ruth Churchill, Arnold Fletcher, Myrna Miller, Judith Pendergrass, Jane Porter Stutz, John Clark. 1977.

Due to the highly individual character of most experiential learning, assessment

usually relies upon the informed judgment of an expert. This *Handbook* provides principles and guidelines for the use of expert judgment. The report deals with a number of basic issues that apply to expert judgment generally; e.g., the role of the expert in defining criteria and structuring the assessment procedure so that it will be as reliable and valid as possible, the importance of establishing standards that are defined as systematically and objectively as possible, and the manner in which common rating errors affect the credibility and the fairness of assessment. These various basic principles and steps of assessment are illustrated and discussed in a series of chapters covering the use of judgment in four areas: interviews, product assessment, performance assessment, and the assessment of written material. These chapters include a number of practical hints and suggestions for the improvement of assessment as well as problems and pitfalls to avoid. Several applications are described in detail.

52. *College-Sponsored Experiential Learning—A CAEL Handbook*. John Duley and Sheila Gordon. 1977.

This *Handbook* is designed for faculty as well as other professionals concerned with developing effective programs of off-campus experiential learning and assessing the outcomes of those programs. The authors provide theoretical background for nonsponsored off-campus programs, but place the major emphasis upon pragmatic problems of defining educational objectives, developing placements for students, and preparing those students for effective learning experiences. Special emphasis is given to the problem of monitoring experiential learning as it proceeds and integration of that learning following the off-campus experience. The material provided and the steps suggested are articulated with the *CAEL Student Guide, College-Sponsored Experiential Learning* (item 55).

53. *Learning and Assessing Interpersonal Competence—A CAEL Student Guide*. Paul Breen, Thomas F. Donion, and Urban Whitaker. 1977.

This *Student Guide* is a companion volume to the *Handbook, Teaching and Assessing Interpersonal Competence* (item 48). It is based on the same theoretical framework and contains some identical sections. The special contributions of the *Student Guide* are chapters on planning for experiential learning and preparing for assessment. Detailed suggestions are offered for preparing a life goals autobiography, articulating personal goals to interpersonal development, and selecting an experiential learning site.

54. *Assessing Prior Learning—A CAEL Student Guide*. Aubrey Forrest. 1977.

It is typically the adult student who petitions for college credit based upon prior experiential learning, and this *Student Guide* is directed to that audience. The purpose is to assist such adults in maximizing the value of their prior learning in relation to educational goals and successfully obtaining appropriate credit. The reader is led step by step through the process of identifying learning outcomes, relating them to educational goals, documenting experience, measuring learning outcomes, and requesting credit or recognition.

55. *College-Sponsored Experiential Learning—A CAEL Student Guide*. Hadley Nesbitt. 1977.

This *Student Guide* is designed to help students make the most of the off-campus experiential learning. It is organized around 11 basic steps. These include: selecting and preparing for the learning experience, involvement in the work situation, integrating the learning derived from the experience into an ongoing academic

program. Charts, checklists, and worksheets serve as aids for dealing effectively with each of the 11 steps. This *Guide* is coordinated with item 52.

56. *CAEL Literature Guide*. Jane Porter Stutz and Joan Knapp. 1977.

There is a large and diffuse body of literature somehow related to experiential learning, but relatively few, mostly recent, items deal specifically with the theory and practice of assessing experiential learning. This annotated bibliography contains a number of items that CAEL has found particularly helpful in one connection or another through its work over the past three years. They cover a variety of topics, including some important literature with which practitioners in this area are not typically familiar, but most of the references deal specifically with the particular types of problems on which CAEL has placed special emphasis.

57. *Assessing Experiential Learning*. Warren W. Willingham, John R. Valley, and Morris T. Keeton. 1977.

This final report of the CAEL project provides an overview of the major activities of CAEL's first three years. In separate chapters it includes a brief history of CAEL, a description of the developmental work, selected important outcomes of the field research, and descriptions of the more significant outcomes of the Operational Models Project and the Faculty Development Program. The final chapter attempts to give an overall sense of what the project accomplished and what major conclusions and implications can be drawn from the effort.

58. *CAEL Directory*.

Each year CAEL produced an Assembly Directory. It lists all current institutional members, including official representatives and addresses.

APPENDIX B.

CAEL COMMITTEES AND PARTICIPANTS

CAEL Executive Committee

George Ayers, Metropolitan State University (Secretary as of 10/76)
Barbara Barbato, Webster College
Sheila Gordon, LaGuardia Community College
Morris Keeton, Antioch College (Chairperson)
Jules Pagano, Florida International University (Vice-Chairperson)
David Provost, California State University and Colleges
Peter Smith, Community College of Vermont

CAEL Administrative Staff

Warren W. Willingham, Project Director
John R. Valley, Director of Assembly Activities
Diana Bamford-Rees, Administrative Associate
Jane Porter Stutz, Administrative Associate
Linda Cokos, Administrative Assistant
Dorothy Sargent, Administrative Assistant

CAEL Implementation Committee

Richard L. Burns Educational Testing Service	Dabney Park, Jr. Florida International University
Ruth D. Churchill Antioch College	José R. Rivera El Paso Community College
Arnold Fletcher Thomas A. Edison College	Bernard Sloan New College, University of Alabama
Aubrey Forrest, Chairperson Metropolitan State University	Urban G. Whitaker, Vice-Chairperson San Francisco State University
Myrna R. Miller Vermont State Colleges	Warren W. Willingham Educational Testing Service
Joseph R. Palladino Framingham State College	

CAEL Resource Panel

Bernice Biggs
Coordinator, General Studies
San Francisco State University

Paul Breen
Assistant Project Director
San Francisco State University

Harriet Cabell
Associate Director
External Degree Program
New College, University of Alabama

Anne Calhoun
Assistant Professor
Metropolitan State University

Ruth Churchill
Dean for Educational Evaluation
Antioch College

Laurent Daloz
Director of Learning Services
Community College of Vermont

John S. Duley
Director, Field Experience Program
Justin Morrill College
Michigan State University

Arnold Fletcher
Vice President for Academic Affairs
Thomas A. Edison College

Aubrey Forrest
Director of Assessment
Metropolitan State University

Sheila Gordon
Associate Dean for Cooperative
Education
LaGuardia Community College

Jan Hagberg
Assistant Professor
Metropolitan State University

Leah Harvey
Instructor, Office of Assessment
Metropolitan State University

Eugene J. Kray
Dean of Community Education
Delaware County Community College

Peter Meyer
Professor of Social Work
Florida International University

Myrna Miller
Coordinator, Assessment Services
Community College of Vermont

Dabney Park, Jr.
Director, External Degree Program
Florida International University

Judith Pendergrass
Director of Admissions and Records
Metropolitan State University

Martha Sachs
Director of Adult Education
Ramapo College of New Jersey

Robert F. Sexton
Executive Director
Office for Experiential Education
University of Kentucky

Mahesh Sharma
Acting Coordinator for Evaluation
Educational Development Center

Bernard Sloan
Coordinator, Out-of-Class Learning
New College, University of Alabama

Urban G. Whitaker
Dean of Undergraduate Studies
San Francisco State University

The following ETS staff collaborated on CAEL developmental work during 1974-75:

Thomas F. Donlon
Joan E. Knapp
Hadley S. Nesbitt
Jane Porter Stutz
Richard R. Reilly
Amiel T. Sharon

Participants in CAEL Field Research

Institutions/Representatives

Alverno College

*Georgine Loacker

Antioch College

*Ruth Churchill

Robert Lewis

Community College of Vermont

*Deborah Chaffee

Larry Daloz

Delaware County Community College

*Eugene Kray

Lori Hultgren

Empire State College

*Albert Serling

Governors State University

*Betty Stanley

Robert Press

Hartwick College

*Edith Daly

Diana Christopoulos

David Jeffres

LaGuardia Community College

*Sheila Gordon

Martin Cohen

Irwin Feifer

Dennis Kelly

Helen McCabe

Macalester College

*Jack Rossman

Charles Green

Metropolitan College, St. Louis

University

*Virginia Beard

Dorothy Fenwick

Katie Holz

Institutions/Representatives

Metropolitan State University

*James Deegan

Janet Hagberg

New College, University of Alabama

*Bernard Sloan

Lisa Cain

Bev Holaday

Harriet Cabell

North Carolina Agricultural and

Technical State University

*Richard Fields

Notre Dame College

*Carol Ann Collins

San Francisco State University

*Urban Whitaker

Paul Breen

Edith Arrick

Staten Island Community College

*Roslyn Atkinson

Gilbert Benjamin

Vincent Massaro

Stephens College

*Lou Ann Tanner

James Waddell

Texas Christian University

*Larry D. Lauer

Thomas A. Edison College

*Paul Jacobs

University of Akron

*Elizabeth Hittle

Joyce Sullivan

Kathryn Vegso

University of California, Los Angeles

*Jane Permaul

*Site Coordinator

Institutions/Representatives

University of Missouri

*John Mowrer

University of Oregon

*Norman Sundberg

Richard Fehnel

Lila McQueen

Janet Moursund

Wichita State University

*Martin Reif

Galan Janeksela

Institutions/Representatives

Educational Testing Service

Thomas F. Donlon

Kurt F. Geisinger

Joan E. Knapp

Richard R. Reilly

Amiel T. Sharon

Jane Porter Stutz

Warren W. Willingham

Participants in the CAEL Operational Models Project

Institutions/Representatives

Antioch College
Ruth Churchill
Janet Hartle
Ralph Wolfe

Community College of Vermont
Laurent Daloz
Clotilde Pitkin

The Consortium of the California State
University and Colleges
Barrie Bortnick
Royce Delmatier
Helen Cheney Gilde
Judson Grenier

Delaware County Community College
Eugene Kray
Lorraine Hultgren

Florida International University
Dabney Park, Jr.
Peter Meyer
Jules Pagano
Nancy Wylie

Memphis State University
Robert Hata
Richard Ranta

Metropolitan State University
James Deegan
Annie Belle Calhoun
Charles Libera

Institutions/Representatives

San Francisco State University
Bernice Biggs
Edith Arrick
Thomas Finn
John Kinch
Gerry Manning
Edwin Williams
Roger Williams

Union College
Dale Myers
Joe Thomas

University of Kentucky
Robert Sexton
Barbara Hofer
John Stephenson
Ernest Yanarella

University of Oregon
Norman Sundberg
Richard Fehnel

Webster College
R. Lynn Kelley
Terrence MacTaggart
Robert Spencer

ETS Staff
Warren W. Willingham,
Project Director

Hadley S. Nesbitt,
Project Manager

John Fremer,
Measurement Consultant

Dean Jamison,
Finance Consultant

Jane Porter Stutz,
Administrative Associate

Barbara Burgess Wolfe,
Finance Consultant

CAEL Faculty Development Program Participants

Institutions/Representatives

Alverno College
Laila Aaen
Margaret Earley

Governors State University
Robert Press
*Betty Stanley

Hartwick College
Diana Christopulos
*David Jeffres

Metropolitan State University
*James E. Deegan
Robert C. Fox

Michigan State University
(Justin Morrill College)
Pearl Aldrich
*John S. Duley

Mount Union College
Donald R. Buckey
*Margaret Simone

Institutions/Representatives

North Carolina Agricultural and
Technical State University
*Benjamin W. Harris
Florentine V. Sowell

Staten Island Community College
*Ann Marmorale
John Mulligan

Temple University
*Irene Casper
Robert H. Schwoebel

The University of Akron
Ruth B. Lewis

University of Evansville
Robert Garnett
*Lorraine R. Matusak

University of Oregon
*Richard A. Fehnel
Norman D. Sundberg

Project Staff

Antioch College
Morris Keeton

Empire State College
John Jacobson

San Francisco State University
Urban G. Whitaker

University of Alabama
Neal R. Berte

Educational Testing Service
Joan E. Knapp

*Team Leader

APPENDIX C.

MEMBERS OF THE CAEL ASSEMBLY

Adelphi University, New York
Alderson-Broadus College, West Virginia
Alternative Education Development Systems, Inc., Maryland
Alverno College, Wisconsin
American College, Pennsylvania
Antioch College, Maryland
Appalachian State University, North Carolina
Augustana College, South Dakota
Baldwin-Wallace College, Ohio
Barat College, Illinois
Berea College, Kentucky
Bergen Community College, New Jersey
Berkshire Community College, Massachusetts
Bethel College, Kansas
Black Hawk College, Illinois
Bloomfield College, New Jersey
Board of Governors, State College and University, Illinois
Borough of Manhattan Community College, New York
Bowie State College, Maryland
Brevard Community College, Florida
Broward Community College, Florida
Bucks County Community College, Pennsylvania
Bunker Hill Community College, Massachusetts
California State College, Bakersfield, California
California State University at Los Angeles, California
California State University and Colleges, California
Calumet College, Indiana
Carlisle College, Pennsylvania
Center for Human Services, Washington, D.C.
Central Michigan University, Michigan
Central Technical Community College, Nebraska
Chapman College, California
Chatham College, Pennsylvania
City College, Washington
City College of Chicago, Illinois
Consortium of the California State University and Colleges, The, California
CUNY Baccalaureate Program, New York
Clark University, Massachusetts
College of Charleston, South Carolina
College of DuPage, Illinois
College of St. Benedict, Minnesota
College of St. Rose, New York
Columbia College, Missouri
Community College of the Air Force, Texas
Community College of Philadelphia, Pennsylvania
Community College of Vermont, Vermont
Culver Stockton College, Missouri
Davis and Elkins College, West Virginia
Delaware County Community College, Pennsylvania

Delgado College, Louisiana
 Delta College, Michigan
 Detroit Institute of Addiction Research and Training, Michigan
 Dominican College of Blauvelt, New York
 Drake University, Iowa
 Dyke College, Ohio
 East Central College Consortium, Ohio
 East Texas State University, Texarkana, Texas
 East Texas State University, Commerce, Texas
 Eastern Connecticut State College, Connecticut
 Eastern Washington State College, Washington
 Eckerd College, Florida
 Edinboro State College, Pennsylvania
 Elmhurst College, Illinois
 Elmira College, New York
 El Paso Community College, Texas
 Elizabethtown College, Pennsylvania
 Empire State College, New York
 Evergreen State College, Washington
 Fielding Institute, The, California
 Florida Department of Education, Florida
 Florida International University, Florida
 Fordham University at Lincoln Center, New York
 Fort Wright College, Washington
 Georgian College of Applied Arts & Technology, Georgia
 Glassboro State College, New Jersey
 Golden West College, California
 Governors State University, Illinois
 Harford Community College, Maryland
 Hartford Graduate Center, The, Connecticut
 Hartwick College, New York
 Hood College, Maryland
 ICS Center for Degree Studies, Pennsylvania
 Illinois Board of Higher Education, Illinois
 Indiana University, Indiana
 Johns Hopkins University, Maryland
 Johnston College - University of Redlands, California
 Justin Morrill College - Michigan State University, Michigan
 Kansas Community College, Kansas
 Kansas State University, Kansas
 Kean College of New Jersey, New Jersey
 Kent State University, Ohio
 Kings College, Pennsylvania
 LaGuardia Community College of CUNY, New York
 Lambton College, Canada
 Lancaster Bible College, Pennsylvania
 La Verne College, California
 Leeward Community College, Hawaii
 Lehigh County Community College, Pennsylvania
 Lincoln Memorial University, Tennessee
 Lincoln University/Eaglesville Master Program, Pennsylvania
 Luzerne County Community College, Pennsylvania
 Madonna College, Michigan

Mars Hill College, North Carolina
 Memphis State University, Tennessee
 Mercer County Community College, New Jersey
 Metropolitan State College, Colorado
 Metropolitan State University, Minnesota
 Miami University, Florida
 Miami-Dade Community College, Florida
 Middlesex County College, New Jersey
 Montana State University, Montana
 Morgan State University, Maryland
 Morningside College, Iowa
 Mount Union College, Ohio
 Mountain View College, Texas
 Muskingum College, Ohio
 National Center for Public Service Internship Programs, Washington, D.C.
 National University, California
 Nazareth College at Kalamazoo, Michigan
 New College - University of Alabama, Alabama
 New Jersey Education Consortium, Inc., New Jersey
 Northampton County Area Community College, Pennsylvania
 Northeast Illinois University, Illinois
 Northeastern University, Massachusetts
 Ohio University, Ohio
 Orange Coast College, California
 Oregon State University, Oregon
 Ottawa University, Missouri
 Our Lady of Angels College, Pennsylvania
 Pace University, New York
 Park College, Missouri
 Pennsylvania Department of Education, Pennsylvania
 Peralta College for Nontraditional Study, California
 Piedmont Tech College, South Carolina
 Pioneer Community College, Missouri
 Point Park College, Pennsylvania
 Ramapo College of New Jersey, New Jersey
 Raymond College/University of the Pacific, California
 Reading Area Community College, Pennsylvania
 Regional Learning Service of Central New York, New York
 Rhode Island College, Rhode Island
 Ricks College, Idaho
 Rockland Community College, New York
 Roosevelt University, Illinois
 Rutgers University, New Jersey
 Sacred Heart University, Connecticut
 St. Edward's University, Texas
 Saint Mary's College, Minnesota
 St. Thomas Aquinas College, New York
 Salem State College, Massachusetts
 San Francisco State University, California
 Sangamon State University, Illinois
 School for International Training, Vermont
 Siena Heights College, Michigan
 Sinclair Community College, Ohio

Southeastern Massachusetts University, Massachusetts
 Southern Illinois University at Carbondale, Illinois
 Southern Oregon College, Oregon
 SUNY/College at Old Westbury, New York
 Staten Island Community College, New York
 Stephens College, Missouri
 Suomi College, Michigan
 Susquehanna University, Pennsylvania
 Syracuse University, New York
 Temple University, Pennsylvania
 Texas Southern University, Texas
 Thomas A. Edison College, New Jersey
 Thomas Nelson Community College, Virginia
 Towson State College, Maryland
 Trent University, Canada
 Trinity College, Washington, D.C.
 Union College, Kentucky
 Union for Experimenting Colleges & Universities, Ohio
 Universidad Simon Rodriguez, Venezuela
 Universite de Montreal, Canada
 University of Akron, Ohio
 University of Alabama, Birmingham, Alabama
 University of Chicago, Illinois
 University of Arkansas at Little Rock, Arkansas
 University of California at Los Angeles, California
 University of Cincinnati, Ohio
 University of Dayton, Ohio
 University of D.C., Mt. Vernon campus, Virginia
 University of Evansville, Illinois
 University of Idaho, Idaho
 University of Illinois at Chicago Circle, Illinois
 University of Houston, Texas
 University of Kentucky, Kentucky
 University of Maryland, Maryland
 University of Massachusetts, Boston, Massachusetts
 University of Minnesota, Minnesota
 University of Missouri, Missouri
 University of New Hampshire, New Hampshire
 University of North Carolina at Chapel Hill, North Carolina
 University of Northern Colorado, Colorado
 University of Oklahoma, Oklahoma
 University of Oregon, Oregon
 University of Pennsylvania, Pennsylvania
 University of San Francisco, California
 University of Scranton, Pennsylvania
 University of South Alabama, Alabama
 University of Tennessee, Tennessee
 University of Texas at Dallas, Texas
 University of Utah, Utah
 University of Wisconsin, Green Bay, Wisconsin
 University of Wisconsin, Madison, Wisconsin
 University of Wisconsin, Milwaukee, Wisconsin
 University of Wisconsin, Oshkosh, Wisconsin

University of Wisconsin System, Wisconsin
University of Wisconsin, Whitewater, Wisconsin
Up-With-People, Arizona
Valencia Community College, Florida
Villanova University, Pennsylvania
Virginia Commonwealth University, Virginia
Virginia Polytechnic Institute and State University, Virginia
Washington International College, Washington, D.C.
Washington University, Missouri
Waukesha County Tech Institute, Wisconsin
Wayne State University, Michigan
Weber State College, Utah
Webster College, Missouri
Western New England College, Massachusetts
Westminster College, Utah
Whatcom Community College, Washington
Whitehead College of University of Redlands, California
William Rainey Harper College, Illinois
Winona State College, Minnesota
World University, Puerto Rico